

Annual Groundwater Monitoring Report (Year 2001) South Point Plant Superfund Site Remedial Action South Point, Ohio

April 19, 2002

Submitted to:

Honeywell International Inc. 101 Columbia Road Morristown, NJ 07962-2105

Submitted by:

Cox-Colvin & Associates, Inc. 1151 Bethel Road, Suite 101 Columbus, Ohio 43220 (614) 442-1970





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April 19, 2002

Mr. Matt Mankowski USEPA, Region V HSRW-65 77 West Jackson Chicago, Illinois 60604

Re: Annual Groundwater Monitoring Report (Year 2001), South Point Plant Superfund Site

Remedial Action, South Point, Ohio - Electronic Data Deliverable

Dear Mr. Mankowski:

This cover letter accompanies the electronic data deliverables (EDD) and presents a summary of the information provided on disk. As you are aware, filing of the EDD is not required under the ROD for the South Point Plant Site. However, Honeywell International did agree to provide a limited information package in the Region V format.

The data is contained in three files on the attached 3.5-inch floppy disk. The contents of the files are provided below.

File	Contents
SouthPoint20020419.OHD071650592.EPAR5SMP_v1	Comma-delimited chemistry sample file
SouthPoint20020419.OHD071650592.EPAR5CWTR_v1	Comma-delimited water level file
SouthPoint20020419.OHD071650592.EPAR5TRS_v1	Comma-delimited chemistry test/result file

If you should have any questions concerning the information presented on the attached disk, please feel free to contact me at any time.

Sincerely,

Cox-Colvin & Associates, Inc.

Craig A. Cox, CPG Principal Scientist

Attachments

cc: T. Metcalf, Honeywell (w/o EDD)

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Submitted by:

Martin (Mort) Schmidt, CPG
Project Scientist

and

Craig A. Cox, CPG Principal



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1.0 Introduction

This document represents the annual report for the groundwater monitoring program conducted at the South Point Superfund Site (Plant) in South Point, Ohio during the year 2001. Groundwater monitoring was conducted, and this report was prepared, in accordance with the Final Design Report (FDR) for the South Point Plant Superfund Site (Parsons Engineering Science (Parsons), 2001). Groundwater quality and flow conditions are monitored semi-annually. The objective of this monitoring is to assess the flow and quality of groundwater until the remedial goals for groundwater are met.

This report presents the site setting, the field methods used for groundwater monitoring, the results of the groundwater monitoring, the NPDES permitted discharge trends, and the conclusions and recommendations for further monitoring. In addition, the groundwater quality data was provided to USEPA in an electronic form consistent with Region V's electronic data deliverable (EDD) format.

2.0 Site Setting

The Plant is located on a relatively flat part of an Ohio River terrace, within the eastern flood plain of the Ohio River (Figure 2-1). The Plant is situated on 70 to 100 feet of unconsolidated alluvium and glacial outwash sediment resting on bedrock. The glacial sediments comprise the principal aquifer of the area. Overlying the aquifer is a relatively uniform silt and fine sand unit which is generally seven to 10 feet thick.

Groundwater in the unconsolidated aquifer is present under unconfined conditions. The water table (phreatic surface) occurs at an average elevation of 514 feet msl in observation wells at the Plant. This corresponds to an average depth-to-water of 45 feet. The average saturated thickness of the aquifer is 38 feet. Pumping test results indicate that the transmissivity of the aquifer is approximately 13,500 ft²/day and the average hydraulic conductivity is 386 ft/day. Using an effective porosity of 0.2, groundwater velocities were calculated to range from 3.9 ft/day to 19 ft/day during the RI (Geraghty & Miller, 1994).

During the RI, groundwater was determined to be impacted by elevated levels of waste specific compounds (nitrate and ammonia), sulfate, iron, manganese, and other metals from on-site sources. Contaminant plumes were identified beneath the Plant and centered on the Plant's Central Well Field and Disposal Area D. Results of a borehole conductivity survey conducted during the RI indicate that, contaminant concentrations are highest, in general, near the top of the aquifer and diminish with depth. Based on the findings of the RI, a

Baseline Risk Assessment, and an Ecological Risk Assessment, preliminary remedial goals (PRGs) were developed for constituents of concern in soil and groundwater. The PRGs for groundwater chemicals of concern are presented in Table 2-1.

The following remedial action objectives address groundwater for protection of human health and the environment:

- prevent ingestion of contaminated groundwater (nitrates, ammonia, metals) under the Plant by future human receptors, and
- restore quality of the local groundwater under the Plant.

The selected remedy for groundwater, as proposed by Remedial Alternative RA-5A in USEPA's Proposed Plan (USEPA, 1997), consists of:

- institutional controls.
- containment through pumping of the existing containment system, and
- discharge to the Ohio River.

3.0 Field Methods

The field activities of the semi-annual groundwater monitoring program were conducted in April and October 2001. The locations of the wells used for containment, water-level monitoring, and groundwater quality monitoring are presented on Figure 3-1.

3.1 Well Network Status

Well MW-06 was abandoned in August 2000 to accommodate the construction of the cap at the Eastern Disposal Area and will be replaced before the April 2002 sampling event. Observation well SPOB-26 was apparently damaged between the April and October 2001 sampling events and will also be repaired or replaced before April 2002.

Production wells SPIS-23 and SPIS-24 were rehabilitated during 2001 in order to improve their performance and flow rates. To maintain capture of the contaminant plume, only one well was under repair at any time. The status of the well network is summarized in Table 3-1.

3.2 Water-level Measurements

Groundwater levels were measured to determine the direction of groundwater flow during each monitoring event. Static groundwater-level measurements were collected from the monitor well network during each episode of water-level collection. An electronic water-level indicator was used to measure the distance between the surveyed measuring point and the groundwater surface. These measurements were subtracted from surveyed elevations to determine groundwater elevations which in turn were used to generate groundwater flow maps. Table 3-2 provides the water-level measurements collected during the scheduled monitoring dates in 2001.

Wells SPIS-25, -26, and -27 appear to be yielding anomalous water levels that may be attributable to measuring point elevation errors. These locations will be resurveyed in 2002 in conjunction with the repair or replacement of MW-06 and SPOB-26.

3.3 Groundwater Sampling

Prior to initiation of purging and sampling activities, static water levels were measured in all monitor wells as described above. Groundwater samples were collected from 16 monitor and/or production wells during the year 2001. Monitoring wells were purged and sampled using disposable HDPE bailers and nylon rope. A new bailer and rope were used at each sampling point. Production wells were purged and sampled while operating. Purging and sampling was conducted in accordance with the SOPs provided in the Performance Verification Sampling Plan attached to the FDR (Parsons, 2001). Water sampling logs are provided in Appendix A.

The wells used for collection of groundwater samples are indicated on Table 3-1. Samples were submitted for laboratory analysis of ammonia, selected total metals (arsenic, beryllium, cadmium, copper, manganese, nickel), and nitrate/nitrite.

4.0 Results

This section discusses the results of the field activities and laboratory analyses obtained for the groundwater monitoring program during year 2001. The discussions will include groundwater elevations, groundwater flow, groundwater quality, the extracted volumes of water, extracted contaminant mass, and hydraulic containment.

4.I Groundwater Flow

Groundwater level data collected during 2001 is provided in Table 3-2. The groundwater elevation data from two semi-annual monitoring events were used to generate water-table maps which indicate the direction of groundwater flow. Figures 4-1 and 4-2 indicate that the groundwater flow at the site is primarily to the southwest, toward the Ohio River and a groundwater depression formed by the containment wells SPIS-23 and SPIS-24. The hydraulic gradient of the groundwater surface was 0.0023 and 0.0018 feet/feet in April and October 2001, respectively. Based on a hydraulic conductivity of 386 ft/day and an effective porosity of 0.2, groundwater flow velocity is calculated to range from 3.5 to 4.5 ft/day, which is consistent with the values determined during the RI.

4.3 Groundwater Quality

Analytical results for the two semi-annual sampling events are provided in Table 4-1. Analytical data sheets are provided in Appendix B. Concentrations of ammonia, nitrate/nitrite, and manganese were reported above PRGs for groundwater collected during both sampling events. Details of the exceedances are discussed below.

4.3.1 Ammonia

Although ammonia is present in many of the groundwater samples analyzed, it was detected above the site-specific PRG of 30 mg/l in only two locations during 2001 (Table 4-1). Ammonia was detected at concentrations of 72 mg/l in April 2001 and 75 mg/l in October 2001 in monitor well MW-07. Ammonia was detected at a concentration of 71 mg/l in April 2001 in monitor well MW-09.

Figures 4-3 and 4-4 depict the areal distribution of ammonia in groundwater at the Plant. Identified on these figures are the inferred extent of the ammonia plumes that exceed the PRG of 30 mg/l. The plumes are confined upgradient of the two containment wells (SPIS-23 and SPIS-24). Figure 4-5 presents a comparison of ammonia concentration trends for selected wells since the monitoring program began in 2000. Ammonia concentrations increased in 2000 in the Mid-Plant Area (MW-07) and appeared to have peaked in April 2001. A similar trend was seen in Disposal Area D (SPMW-09) These increases in ammonia concentration is not well understood, but may be connected with excavation activities in these area.

4.3.2 Nitrate/Nitrite

Although nitrate/nitrite is present in most of the groundwater samples analyzed, it was detected at or above the site-specific PRG of 10 mg/l in only three wells during 2001 (Table 4-1). In April 2001, nitrate/nitrite was detected in MW-02, MW-07, and SPIS-24 at levels of 10, 17, and 7.8 mg/l, respectively. In October 2001, nitrate/nitrite was detected in MW-02, MW-07, and SPIS-24 at levels of 4.4, 0.4, and 11 mg/l, respectively.

Figures 4-3 and 4-4 depict the areal distribution of nitrate/nitrite in groundwater at the Plant. Identified on these figures is the inferred extent of the nitrate/nitrite plume that exceeds the PRG. The Mid-Plant Area plume is confined upgradient of the two containment wells (SPIS-23 and SPIS-24). The Disposal Area D plume which was present in 2000 dropped below the PRG in 2001. Figure 4-6 presents a comparison of nitrate/nitrite concentration trends for selected wells since the monitoring program began in 2000. The data indicate that, in general, nitrate/nitrite concentrations are declining.

4.3.3 Manganese

Manganese was present in all groundwater samples analyzed during year 2001. However, it was detected at or above the site-specific PRG of 1.4 mg/l in only four locations during 2001 (Table 4-1). Manganese was detected in MW-02, MW-09, and MW-10 at levels of 2.1, 14.7, and 1.6 mg/L, respectively, during the April 2001 sampling event. Manganese was detected at levels of 2.6, 3.4, and 7.4 mg/L in MW-03, MW-09, and MW-10, respectively during the October 2001 sampling event.

Figures 4-3 and 4-4 depict the areal distribution of manganese in groundwater at the Plant. Because of the sporadic distribution of manganese within the aquifer, distinct "plumes" were not inferred. Figure 4-7 presents a comparison of manganese concentration trends for selected wells since the monitoring program began in 2000. There are no discernable trends in the manganese concentrations.

4.4 Extracted Groundwater and Contaminant Mass

In-line cumulative flow meter readings indicate that a combined total of approximately 280 million gallons of groundwater were extracted by the containment well SPIS-23 and SPIS-24 during the year 2001. Individual totals for SPIS-23 and SPIS-24 were 141 million and 139 million gallons, respectively (Table 4-2).

Using the groundwater extraction information and the groundwater quality results, the mass of contaminants removed from the groundwater beneath the Plant can be calculated. The summarized calculations are provided in Table 4-3. The extracted mass of those contaminants of concern detected above PRGs during the year 2001 are as follows:

- Ammonia 11,576 kg;
- Nitrate/Nitrite 6,921 kg; and
- Manganese 310 kg.

4.5 Hydraulic Containment

The Feasibility Study (FS) for the Plant (Geraghty & Miller, 1997) included a groundwater modeling simulation that demonstrated that pumping SPIS-23 and SPIS-24 would provide a capture zone capable of capturing the present day plume (Figure 4-8). This capture zone model was based on a pumping rate of 150 gpm for each extraction well, and is therefore quite conservative. The actual pumping rates of the containment wells SPIS-23 and SPIS-24 were considerably higher. SPIS-23 pumped at a rate of 196 and 342 gallons per minute (gpm) during the monitoring events in April and October 2001, respectively. SPIS-24 pumped at 237 and 293 gpm during those same respective time periods. This pumping rate has been effective in containing the groundwater plumes as demonstrated by the analytical results discussed in Section 4.3.

5.0 NPDES Discharge Trends

Groundwater from extraction wells and storm water runoff is combined and then discharged through an outfall to the Ohio River. This outfall is permitted under Ohio EPA National Pollutant Discharge Elimination System (NPDES), which details effluent limitations and monitoring requirements.

The site's NPDES permit is maintained and monitored by the Lawrence Economic Development Corporation. The 5-year permit (Number 0IN00088*DD) will require renewal by October 1, 2003. The permit requires daily monitoring of the flow rate, monthly sampling for ammonia and nitrate concentrations, and semi-annual sampling for pH and acute toxicity at Outfall 007. This outfall is equipped with an automated monitoring system. There are currently no permit limits for ammonia and nitrate. The permitted range for pH is 6.5 to 9.0 standard units. The permit limit for acute toxicity is 3.1 acute toxicity units.

A March 23, 1993 NPDES Permit Renewal Application No. OH0076392, submitted to the Ohio EPA Southeast District Office, Division of Water Pollution Control, provided a thorough characterization of the Plant effluent flow to the Ohio River, including sample results for all contaminants which were determined to be constituents of concern in the FS. The Ohio EPA conducted a review of the renewal application, including a Water-Quality Based Effluent Limits analysis. The current NPDES Permit is based on the results of that evaluation.

Discharge data for ammonia and nitrate/nitrite from January 1997 through December 2001 are provided in Table 5-1 and presented graphically on Figure 5-1. The data indicate a general decline in ammonia and nitrate concentrations over time.

6.0 Summary and Recommendations

Groundwater flow is generally to the southwest toward the Ohio River. Ammonia, nitrate/nitrite, and manganese were detected in groundwater samples from several wells at concentrations above PRGs. The primary contaminant plumes are being captured by containment wells SPIS-23 and SPIS-24. Capture-zone models and inspection of groundwater flow maps support this claim.

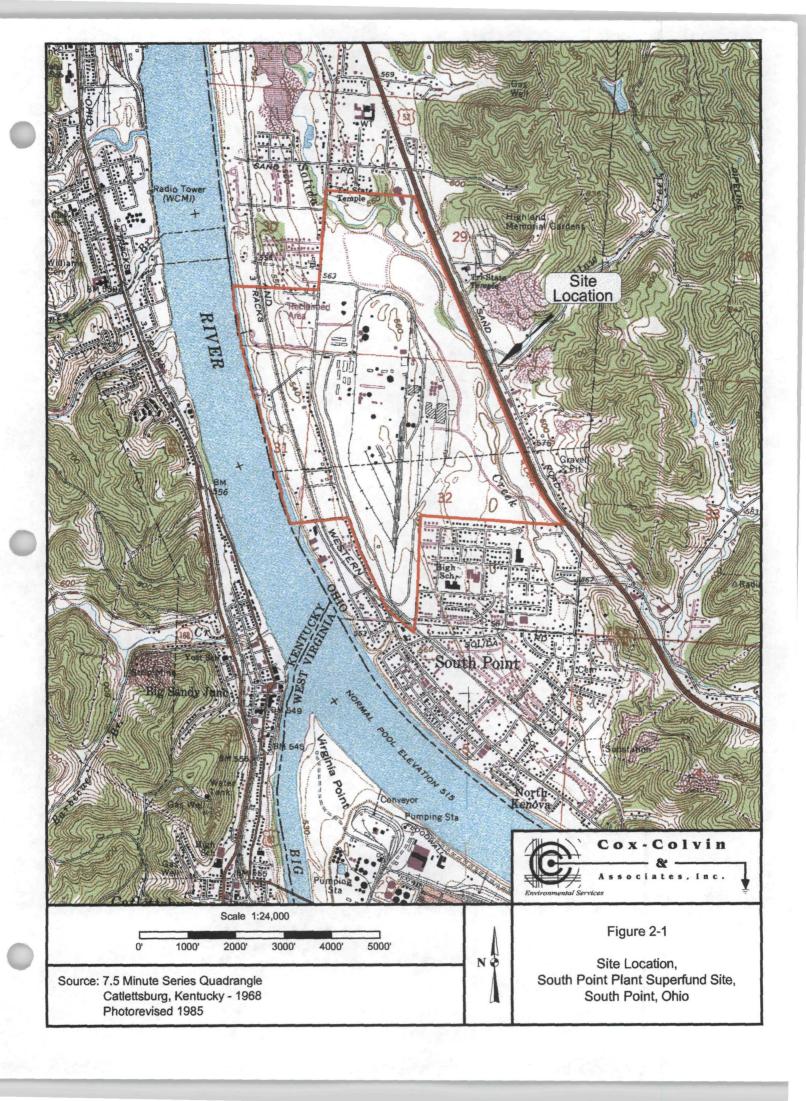
The present scope of groundwater monitoring should be continued for the year 2002. Wells SPMW-06 and SPOB-26 will be replaced or repaired, and their measuring points, together with SPIS-25, 26, and 27 will be resurveyed.

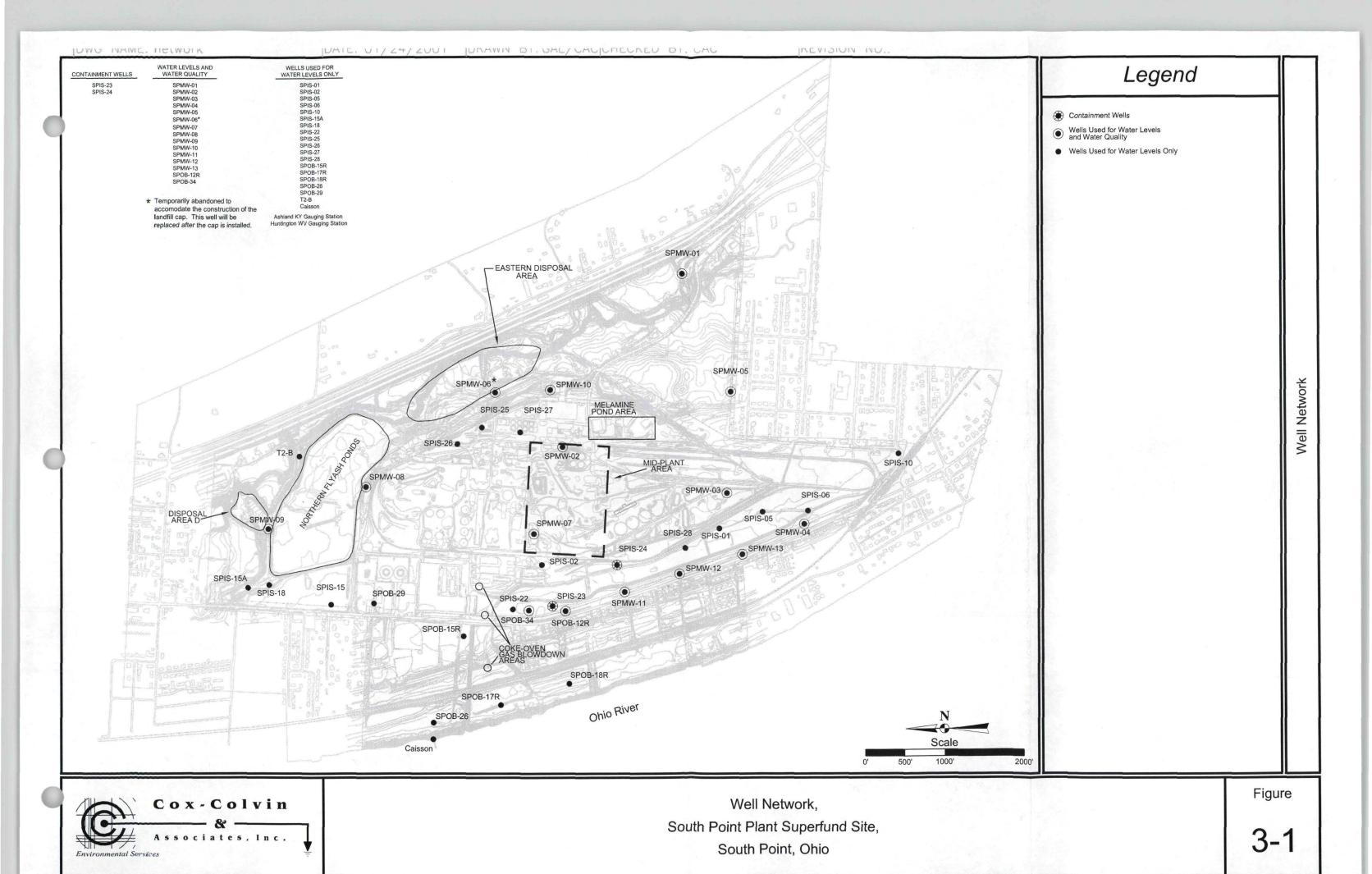
7.0 References

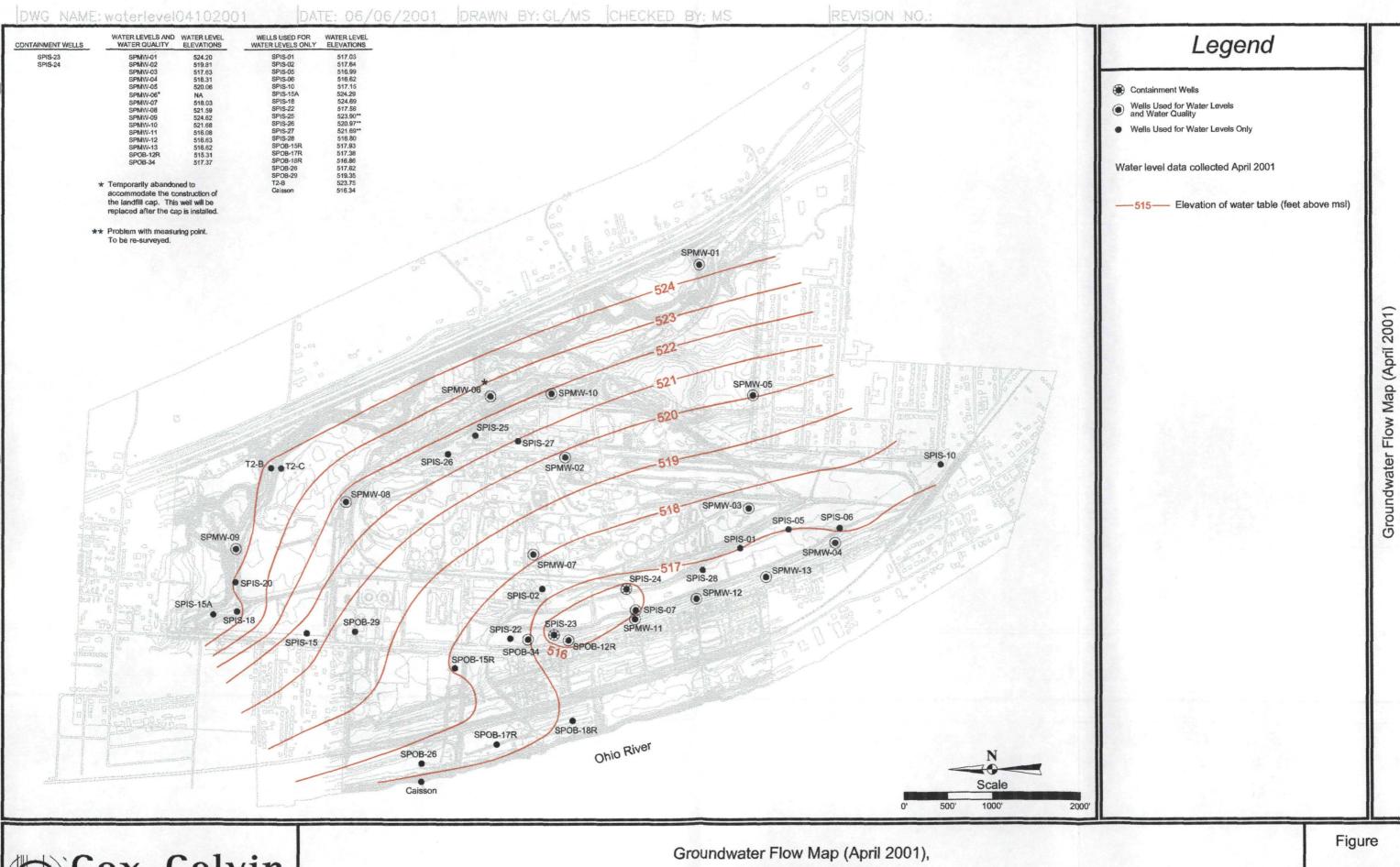
- Geraghty & Miller, Inc., 1997. Final South Point Feasibility Study, South Point, Ohio. Unpublished Consultants Report.
- Parsons Engineering Science, Inc., 1998. Remedial Design Workplan, South Point Superfund Site, South Point, Ohio. Unpublished Consultants Report.
- Parsons Engineering Science, Inc., 2001. Final Design Report, South Point Superfund Site, South Point, Ohio. Unpublished Consultants Report.
- United States Environmental Protection Agency, 1997. Record of Decision (ROD), Allied Signal South Point Plant Site, South Point, Ohio.

Figures

- 2-1 Site Location, South Point Plant Superfund Site, South Point, Ohio.
- 3-1 Well Network, South Point Plant Superfund Site, South Point, Ohio.
- 4-1 Groundwater Flow Map (April 2001), South Point Plant Superfund Site, South Point, Ohio.
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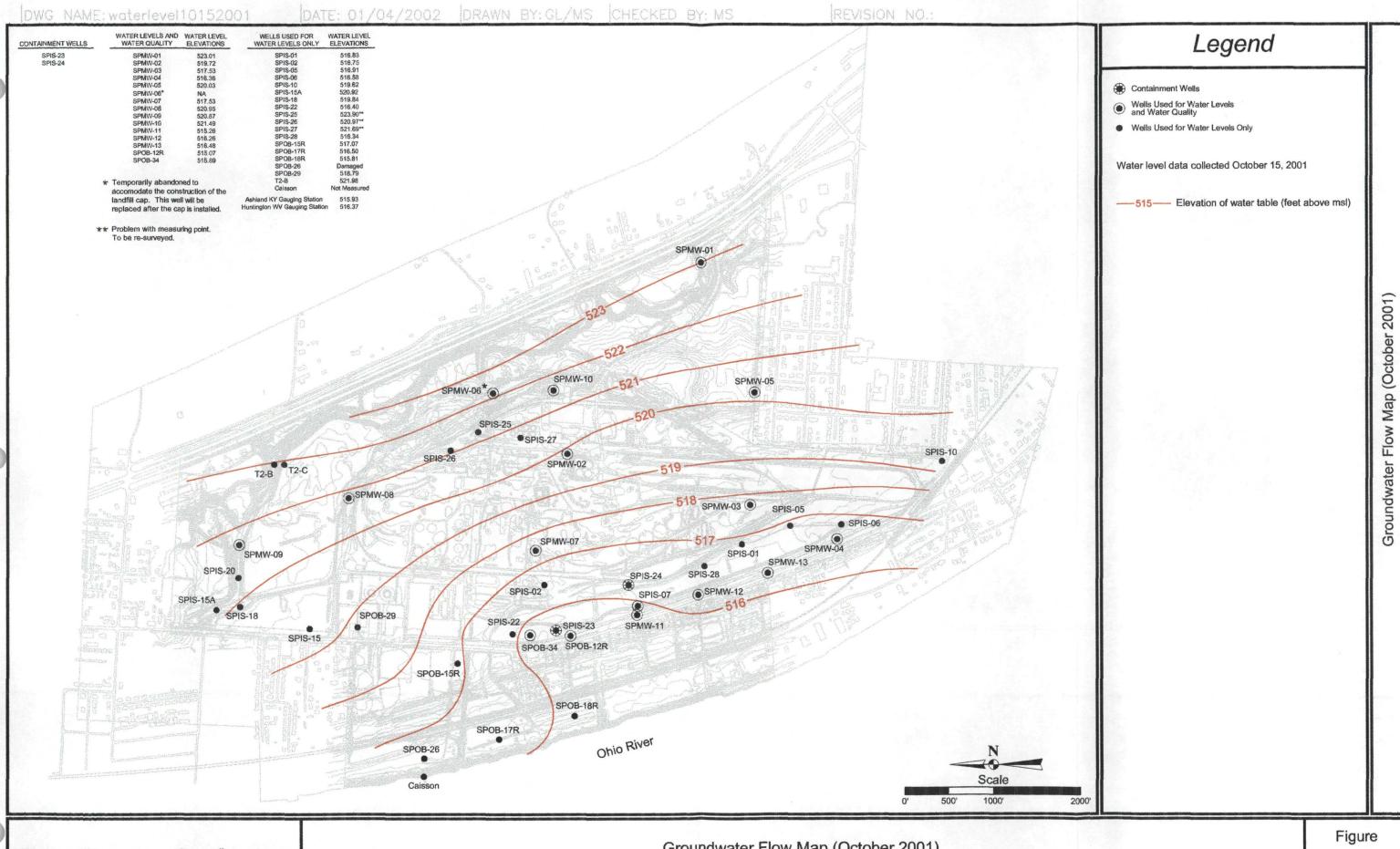






Cox-Colvin BLASSOCIATES, INC. ENVIRONMENTAL SERVICES Groundwater Flow Map (April 2001)
South Point Plant Superfund Site,
South Point, Ohio

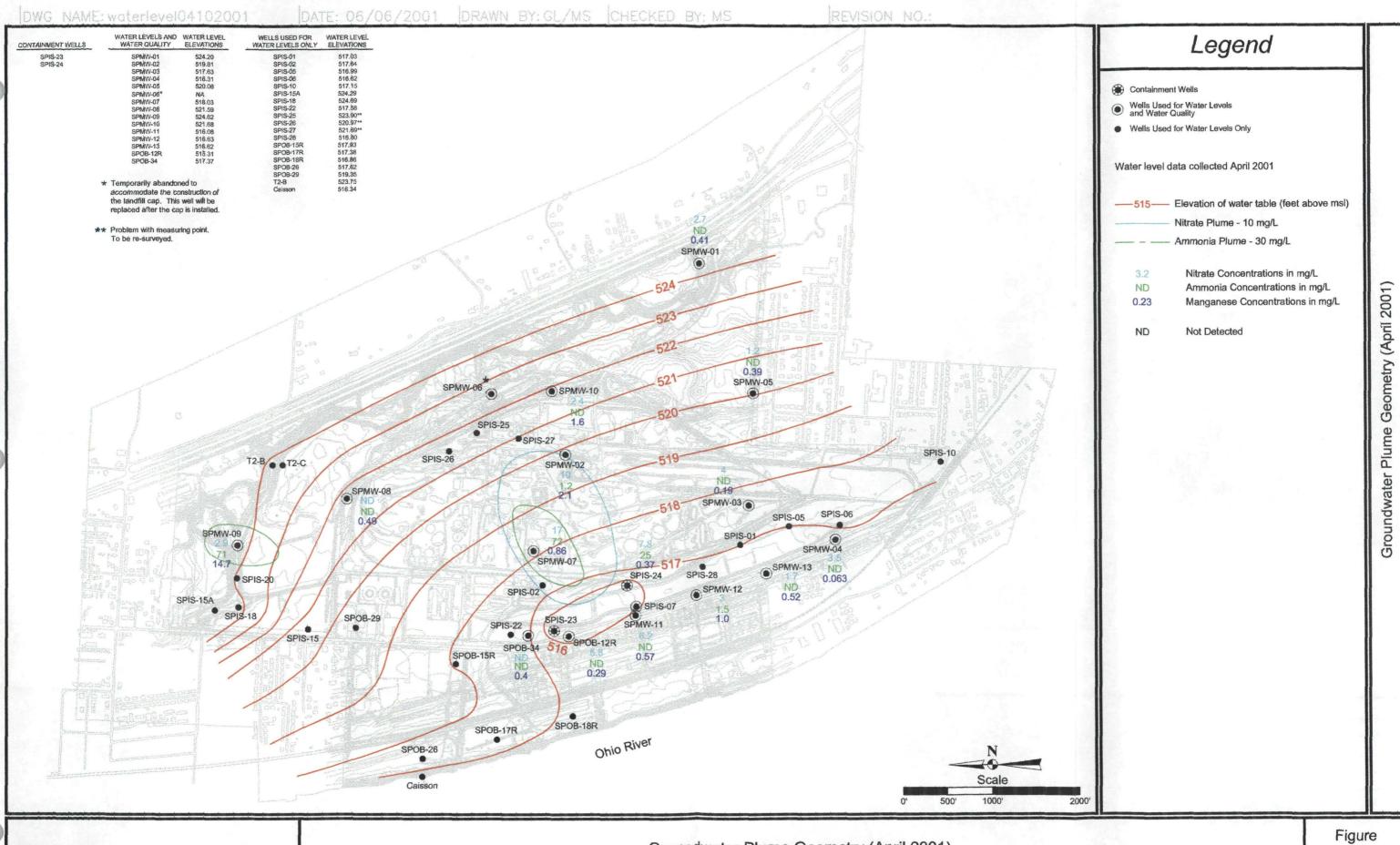
4-1





Groundwater Flow Map (October 2001), South Point Plant Superfund Site, South Point, Ohio

4-2





Groundwater Plume Geometry (April 2001), South Point Plant Superfund Site, South Point, Ohio

4-3

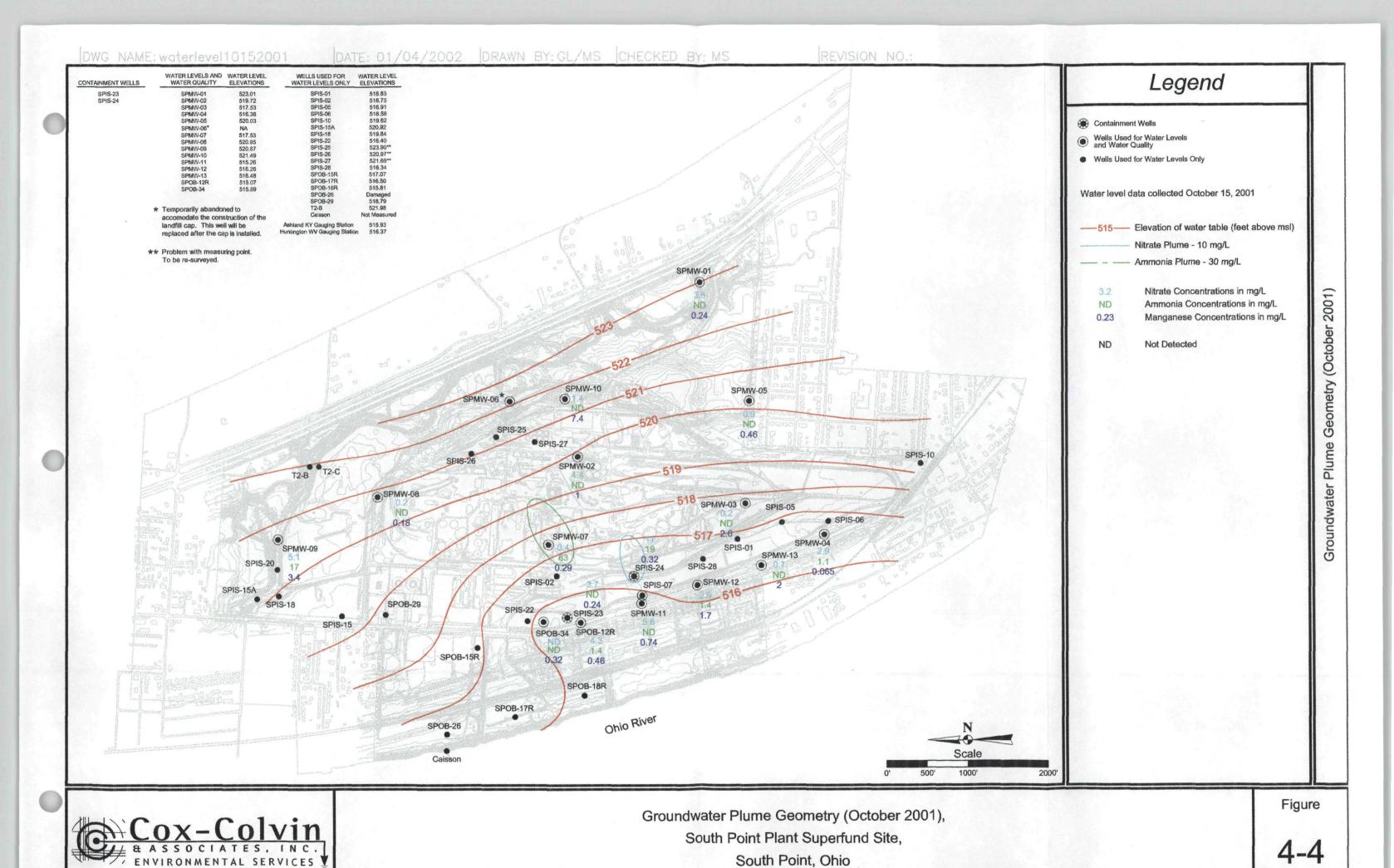


Figure 4-5. Ammonia Trends in Groundwater at the South Point Plant Superfund Site, South Point, Ohio

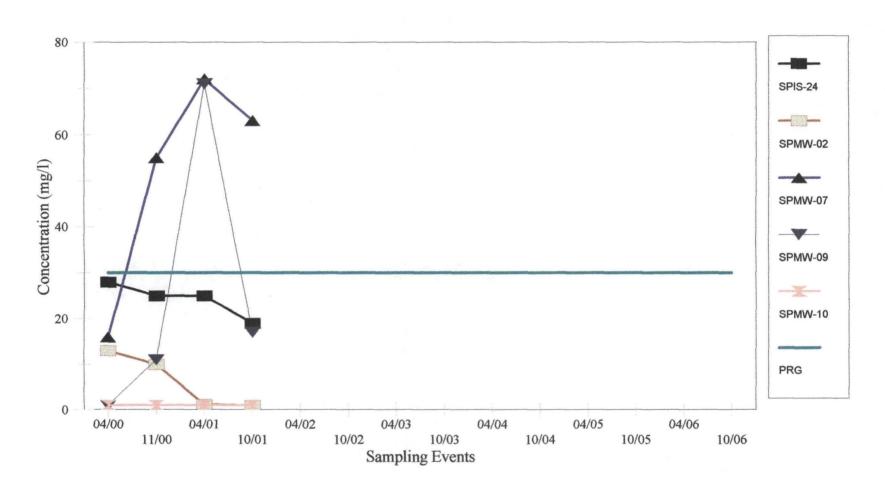


Figure 4-6. Nitrate/Nitrite Trends in Groundwater at the South Point Plant Superfund Site, South Point, Ohio

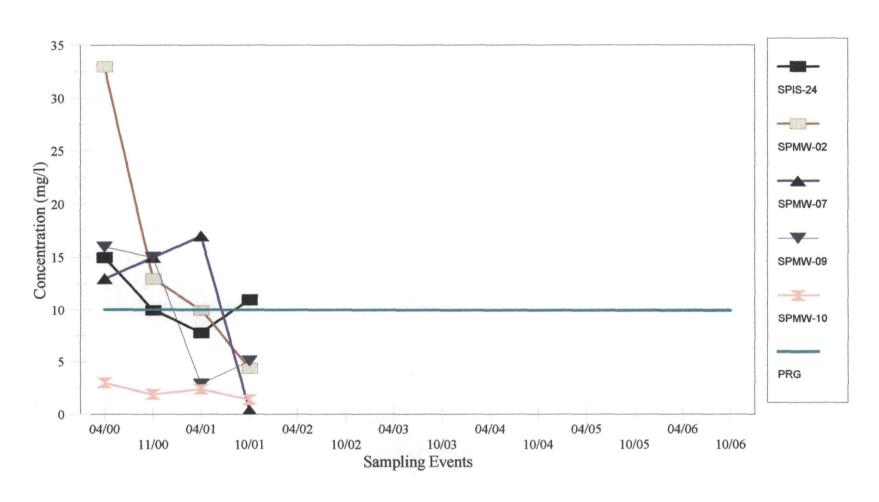
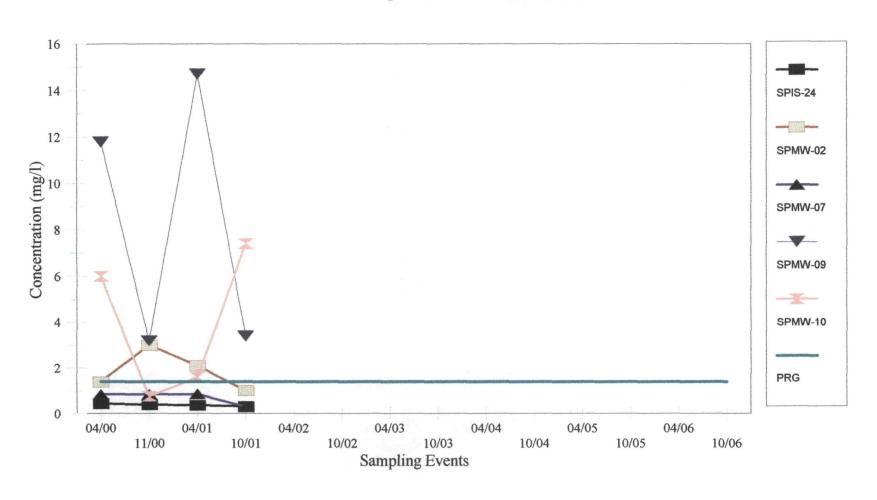


Figure 4-7. Manganese Trends in Groundwater at the South Point Plant Superfund Site, South Point, Ohio



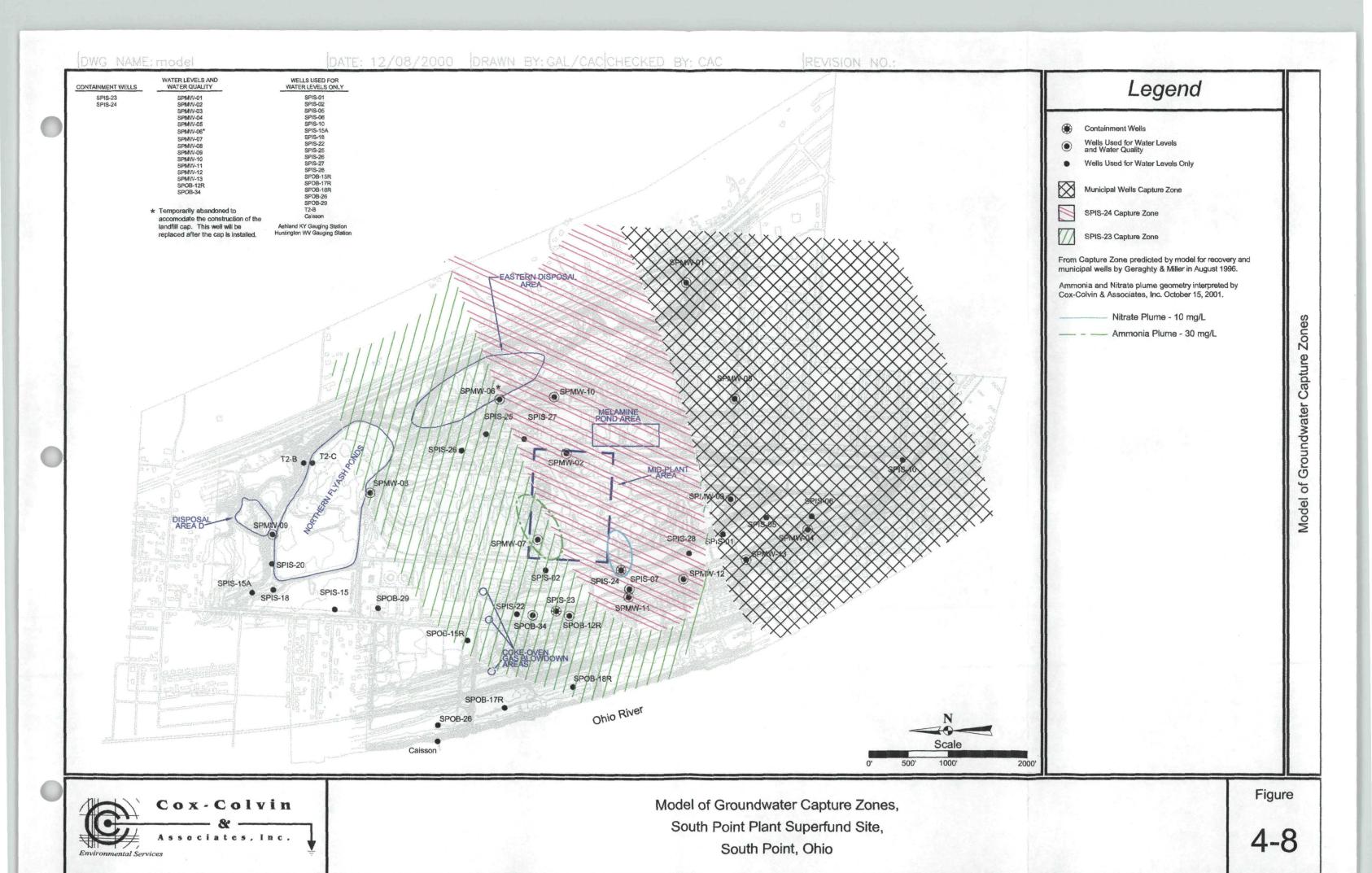
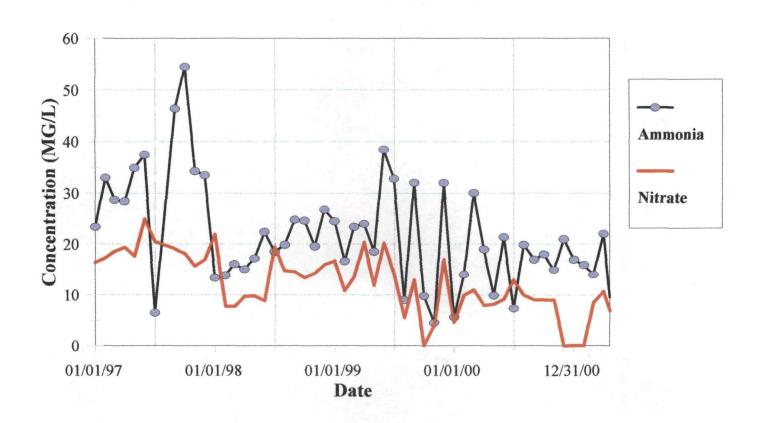


Figure 5-1. NPDES Trends at the South Point Plant Superfund Site, South Point, Ohio



Tables

- 2-1 Constituents of Concern and Performance Standards, South Point Plant Superfund Site, South Point, Ohio.
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- 4-3 Extracted Contaminant Mass during Year 2001, South Point Plant Superfund Site, South Point, Ohio.
- 5-1 NPDES Discharge Data, South Point Plant Superfund Site, South Point, Ohio.

Table 2-1 Constituents of Concern and Performance Standards, South P Plant Superfund Site, South Point, Ohio.

Constituents of Concern	Performance Standard (mg/l)
Arsenic	0.05
Beryllium	0.004
Cadmium	0.005
Copper	3.8
Manganese	1.4
Nickel	2
Ammonia (as Nitrogen)	30
Nitrate/Nitrite	10

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Table 3-1. Well Status, South Point Plant Superfund Site, South Point, Ohio.

	Well	Water	Water
Name	Туре	Levels	Quality
Cassion	River Level Measuring Point	Yes	
SPIS-01	Production	Yes	
SPIS-02	Production	Yes	
SPIS-05	Production	Yes	
SPIS-06	Production	Yes	
SPIS-10	Production	Yes	
SPIS-15	Production	Yes	
SPIS-15A	Production	Yes	
SPIS-18	Production	Yes	
SPIS-22	Production	Yes	
SPIS-23	Production	· · · · · · · · · · · · · · · · · · ·	Yes
SPIS-24	Production		Yes
SPIS-25	Production	Yes	
SPIS-26	Production	Yes	
SPIS-27	Production	Yes	
SPIS-28	Production	Yes	
SPMW-01	Monitor	Yes	Yes
SPMW-02	Monitor	Yes	Yes
SPMW-03	Monitor	Yes	Yes
SPMW-04	Monitor	Yes	Yes
SPMW-05	Monitor	Yes	Yes
SPMW-06*	Monitor	Yes	Yes
SPMW-07	Monitor	Yes	Yes
SPMW-08	Monitor	Yes	Yes
SPMW-09	Monitor	Yes	Yes
SPMW-10	Monitor	Yes	Yes
SPMW-11	Monitor	Yes	Yes
SPMW-12	Monitor	Yes	Yes
SPMW-13	Monitor	Yes	Yes
SPOB-12R	Observation	Yes	Yes
SPOB-15R	Observation	Yes	
SPOB-17R	Observation	Yes	
SPOB-18R	Observation	Yes	
SPOB-26	Observation	Yes	
SPOB-29	Observation	Yes	
SPOB-34	Observation	Yes	Yes
Т2-В	Piezometer	Yes	

^{*} Temporarily abandoned. Will be replaced before April 2002 sampling event.

Table 3-2. Depth to Groundwater and Calculated Groundwater Elevations, South Point Plant Superfund Site, South Point, Ohio.

	Depth-T	o-Water	Water Leve	el Elevation	
Name	04/10/01	10/15/01	04/10/01	10/15/01	
Caisson	33.95	Not Measured	516.34	Not Measured	
SPIS-01	44.46	44.66	517.03	516.83	
SPIS-02	43.97	44.86	517.64	516.75	
SPIS-05	45.32	45.40	516.99	516.91	
SPIS-06	50.53	50.57	516.62	516.58	
SPIS-10	48.42	45.95	517.15	519.62	
SPIS-15A	36.42	39.79	524.29	520.92	
SPIS-18	35.50	40.35	524.69	519.84	
SPIS-22	46.77	47.95	517.58	516.40	
SPIS-25	48.47	48.40	523.90	523.97	
SPIS-26	48.21	48.27	520.97	520.91	
SPIS-27	50.91	50.85	521.69	521.75	
SPIS-28	47.34	47.80	516.80	516.34	
SPMW-01	39.70	40.89	524.20	523.01	
SPMW-02	49.22	49.31	519.81	519.72	
SPMW-03	45.45	45.55	517.63	517.53	
SPMW-04	50.46	50.41	516.31	516.36	
SPMW-05	63.60	63.63	520.06	520.03	
SPMW-06		Replaced		Replaced	
SPMW-07	44.65	45.15	518.03	517.53	
SPMW-08	43.90	44.54	521.59	520.95	
SPMW-09	40.03	43.78	524.62	520.87	
SPMW-10	64.12	64.31	521.68	521.49	
SPMW-11	49.74	50.56	516.08	515.26	
SPMW-12	49.45	49.82	516.63	516.26	
SPMW-13	49.29	49.43	516.62	516.48	
SPOB-12R	49.85	51.71	514.50	515.07	
SPOB-15R	46.47	47.33	517.93	517.07	
SPOB-17R	35.91	36.79	517.38	516.50	
SPOB-18R	35.50	36.55	516.86	515.81	
SPOB-26	35.67	Damaged	517.62	Damaged	
SPOB-29	44.25	44.81	519.35	518.79	
SPOB-34	47.71	49.19	517.37	515.89	
Т2-В	19.15	20.92	523.75	521.98	

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							1 4 6 7 6 7 2
Location			Monitoring Network				
Sample Name	İ	ŀ	SPIS-23	SPIS-24	SPIS-24A	SPIS-24	SPIS-24A
Sample Date	1		10/15/2001	4/11/2001	4/11/2001	10/16/2001	10/16/2001
Sample Type		1	Industrial Supply Well				
Media	ļ		Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab iD	Units	MG/L	A1J180104001	A1D130171001	A1D130171002	A1J180104002	A1J180104003
Arsenic	MG/L	0.05	< .01	< .01	< .01	< .01	< .01
Beryllium	MG/L	0.004	< .003	< .003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	< .002
Соррег	MG/L	3.8	< .025	< .025	< .025	< .025	< .025
Manganese	MG/L	1.4	.24	.37	.37	.32	.3
Nickel	MG/L	2	< .01	< .01	<.01	< .01	< .01
Ammonia as Nitrogen	MG/L	30	< 1	25	24	19	18
Nitrate/Nitrite	MG/L	10	3.7	7.8	8.5	11	11

Location			Monitoring Network				
Sample Name			SPMW-01	SPMW-01	SPMW-02	SPMW-02	SPMW-03
Sample Date			4/11/2001	10/16/2001	4/11/2001	10/16/2001	4/11/2001
Sample Type			Monitor Well				
Media			Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab ID	Units	MG/L	A1D130171003	A1J180104004	A1D130171004	A1J180104005	A1D130171005
Arsenic	MG/L	0.05	< .01	< .01	< .01	< .01	<.01
Beryllium	MG/L	0.004	< .003	< .003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	< .002
Copper	MG/L	3.8	< .025	< .025	< .025	< .025	< .025
Manganese	MG/L	1.4	.41	.24	2.1	1	.19
Nickel	MG/L	2	.014	< .01	< .01	< .01	.01
Ammonia as Nitrogen	MG/L	30	< 1	< 1	1.2	< 1	< j
Nitrate/Nitrite	MG/L	10	2.7	3.6	10	4.4	4

Location			Monitoring Network				
Sample Name			SPMW-03	SPMW-04	SPMW-04	SPMW-05	SPMW-05
Sample Date			10/16/2001	4/12/2001	10/15/2001	4/11/2001	10/15/2001
Sample Type			Monitor Well				
Media	1		Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab ID	Units	MG/L	A1J180104006	A1D130171006	A1J180104007	A1D130171007	A1J180104008
Arsenic	MG/L	0.05	< .01	< .01	< .01	< .01	< .01
Beryllium	MG/L	0.004	< .003	<.003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	< .002
Соррег	MG/L	3.8	< .025	<.025	< .025	< .025	<.025
Manganese	MG/L	1.4	2.6	.063	.065	.39	.46
Nickel	MG/L	2	.039	< .01	< .01	.014	< .01
Ammonia as Nitrogen	MG/L	30	< 1	< 1	1.1	< 1	< 1
Nitrate/Nitrite	MG/L	10	.2	3.5	2.9	1.2	.9

Location			Monitoring Network				
Sample Name	1		SPMW-07	SPMW-07A1	SPMW-07	SPMW-07A1	SPMW-08
Sample Date			4/10/2001	4/10/2001	10/16/2001	10/16/2001	4/11/2001
Sample Type			Monitor Well				
Media			Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab ID	Units	MG/L	A1D130171008	A1D130171009	A1J180104009	A1J180104010	A1D130171010
Агѕепіс	MG/L	0.05	< .01	< .01	< .01	< .01	< .01
Beryllium	MG/L	0.004	< .003	< .003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	< .002
Соррег	MG/L	3.8	< .025	< .025	< .025	< .025	< .025
Manganese	MG/L	1.4	.86	.86	.29	.32	.49
Nickel	MG/L	2	< .01	< .01	< .01	<.01	< .01
Ammonia as Nitrogen	MG/L	30	72	75	63	47	< 1
Nitrate/Nitrite	MG/L	10	17	17	.4	.4	< .1

Replicate sample.
Not detected.

Bold ConcentrationsRepresent values above PRG.PRGPreliminary Remedial Goals.

Table 4-1 Analytical Results for the Year 2000 Monitoring, South Point Plant Superfund Site, South Point, Ohio.

Page 2 of 2

Location			Monitoring Network				
Sample Name	1		SPMW-08	SPMW-09	SPMW-09	SPMW-10	SPMW-10
Sample Date			10/16/2001	4/11/2001	10/15/2001	4/11/2001	10/16/2001
Sample Type			Monitor Well				
Media			Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab ID	Units	MG/L	A1J180104011	A1D130171011	A1J180104012	A1D130171012	A1J180104013
Arsenic	MG/L	0.05	<.01	.02	<.01	10.>	< .01
Beryllium	MG/L	0.004	< .003	< .003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	.0052
Copper	MG/L	3.8	< .025	.36	.037	< .025	< .025
Manganese	MG/L	1.4	.18	14.7	3.4	1.6	7.4
Nickel	MG/L	2	< .01	.21	.02	.021	.1
Ammonia as Nitrogen	MG/L	30	< 1	71	17	< 1	< 1
Nitrate/Nitrite	MG/L	10	.2	2.9	5.1	2,4	1.4

Location			Monitoring Network				
Sample Name			SPMW-11	SPMW-11	SPMW-12	SPMW-12	SPMW-13
Sample Date			4/11/2001	10/15/2001	4/12/2001	10/15/2001	4/12/2001
Sample Type			Monitor Well				
Media			Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab ID	Units	MG/L	A1D130171013	A1J180104014	A1D130171014	A1J180104015	A1D130171015
Arsenic	MG/L	0.05	< .01	.013	< .01	.018	< .01
Beryllium	MG/L	0.004	< .003	< .003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	< .002
Copper	MG/L	3.8	< .025	.025	< .025	.043	< .025
Manganese	MG/L	1.4	.57	.74	1	1.7	.52
Nickel	MG/L	2	.034	.045	.032	.053	i 0. >
Ammonia as Nitrogen	MG/L	30	<1	< 1	1.5	1.4	< 1
Nitrate/Nitrite	MG/L	10	6.2	5.6	3	2.9	1.7

Location			Monitoring Network				
Sample Name	ł		SPMW-13	SPOB-12R	SPOB-12R	SPOB-34	SPOB-34
Sample Date	ł		10/15/2001	4/12/2001	10/15/2001	4/12/2001	10/15/2001
Sample Type			Monitor Well				
Media			Ground Water				
Laboratory	Conc.	PRG	Severn Trent Labs				
Lab ID	Units	MG/L	A1J180104016	A1D130171016	A1J180104017	A1D130171017	A1J180104018
Arsenic	MG/L	0.05	.018	< .01	< .01	.017	.012
Beryllium	MG/L	0.004	< .003	< .003	< .003	< .003	< .003
Cadmium	MG/L	0.005	< .002	< .002	< .002	< .002	< .002
Copper	MG/L	3.8	.044	< .025	< .025	< .025	< .025
Manganese	MG/L	1,4	2	.29	.46	.4	.32
Nickel	MG/L	2	.058	.013	.015	.011	< .01
Ammonia as Nitrogen	MG/L	30	< 1	<1	1.4	< 1	< 1
Nitrate/Nitrite	MG/L	10	.7	5.8	4.3	<.1	<.1

1 Replicate sample. < Not detected.

Bold ConcentrationsRepresent values above PRG.PRGPreliminary Remedial Goals.

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Table 4–2. Extracted Groundwater Volume during Year 2001, South Point Plant Superfund Site, South Point, Ohio.

	P	umping Rate (gpn			
Well ID	April 2001	October 2001	Average	Extracted Volume (gallons)	
SPIS-23	196	342	269	141,386,400	
SPIS-24	237	293	265	139,284,000	
Total				280,670,400	

gpm = gallons per minute

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Table 4-3 Extracted Contaminant Mass during Year 2000, South Point Plant Superfund Site, South Point, Ohio.

	Contam	inant Concen	trations (mg/l)	Extracted	Extracted Contaminant Mass (Kg)
Well ID and Contaminant	April 2001	October 2001	Average	Groundwater Volume (gallons)	
		SPIS	3-23		
Ammonia as Nitrogen	NA	<1	<1	141,000,000	Not Discernable
Nitrate/Nitrite	NA	3.7	3.7	141,000,000	1,975
Manganese	NA	0.24	0.24	141,000,000	128
		SPIS	5-24		
Ammonia as Nitrogen	25	19	22	139,000,000	11,576
Nitrate/Nitrite	7.8	11	9.4	139,000,000	4,946
Manganese	0.37	0.32	0.345	139,000,000	182
		TOT	ALS		
	Amm	onia as Nitroge	en		11,576
	N	itrate/Nitrite		·	6,921
]	Manganese			310

1 gallon = 3.78541 liters

Concentration (mg/l) * Conversion (l/gal) * Volume (gal) * Conversion (kg/mg)

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Table 5-1. NPDES Discharge Data, South Point Plant Superfund Site, South Point, Ohio.

	Flow Rate	Nitrate	Ammonia
Date	MGD	MG/L	MG/L
01/01/97	0.41	16.45	23.4
02/01/97	0.41	17.4	33
03/01/97	0.49	18.61	28.7
04/01/97	0.57	19.42	28.4
05/01/97	0.28	17.65	34.9
06/01/97	0.40	24.94	37.4
07/01/97	0.35	20.51	6.5
09/01/97	0.34	19.1	46.4
10/01/97	0.25	18.16	54.5
11/01/97	0.29	15.77	34.3
12/01/97	0.43	16.98	33.5
01/01/98	1.14	21.89	13.4
02/01/98	0.86	7.7	13.9
03/01/98	1.98	7.74	16.1
04/01/98	2.08	9.77	15.1
05/01/98	1.71	9.8	17.2
06/01/98	2.10	8.93	22.4
07/01/98	0.81	19.5	18.5
08/01/98	0.86	14.8	19.9
09/01/98	1.41	14.63	24.8
10/01/98	1.26	13.45	24.6
11/01/98	1.28	14.3	19.6
12/01/98	1.18	16.01	26.8
01/01/99	1.21	16.74	24.5
02/01/99	1.32	10.9	16.7
03/01/99		13.5	23.4
04/01/99		20.4	24
05/01/99	0.27	11.9	18.6
06/01/99	0.46	20.3	38.4
07/01/99	0.46	14.3	32.8
08/01/99	0.47	5.5	9
09/01/99	0.87	13	32
10/01/99	0.68	0.1	9.8
11/01/99	1.70	4	4.5
12/01/99	0.69	17	32
01/01/00	0.72	4.6	5.6
02/01/00	1.10	10	14
03/01/00	1.06	11	30
04/01/00	1.41	8	19
05/01/00	1.24	8.2	9.94
06/01/00	1.26	9.2	21.4
07/01/00	2.06	13	7.3
08/01/00	1.13	10	19.9
09/01/00	1.16	9	17
10/01/00	1.36	9	18
11/01/00	1.14	9	15
12/01/00	1.02	0	21
01/01/01	1.27	0.1	17
02/01/01	1.33	0.1	16
03/01/01	1.17	8.5	14
04/01/01	0.74	10.7	22
05/01/01	1.07	4.4	1.3
06/01/01	1.23	7.4	13
07/01/01	1.24	8.5	13
	1.35	6.4	11
08/01/01		V. T	
08/01/01		8 5	1 14
09/01/01	1.16	8.5	14
09/01/01 10/01/01	1.16 1.29	8.4	15
09/01/01	1.16		

MGD Million gallons per day MG/L Milligram per liter

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Appendix A

Appendix A

Well Construction Logs



Water Sampling Log

PROJECT/NO. South Pour	4 11 / .	
WELL NO. 3215 - 24 RE	PLICATE NO. 15815-24.4 DATE 4/11/01	
WEATHER PESTIN CLOSELY 80 TI	me BEGAN 16:20 Time COMPLETED +6	145(KV) 17:30
	PLICATE NO. 15915-24.A DATE 4/11/01 me BEGAN 16:20 Time COMPLETED 16 proge har	
	EVACUATION DATA	
DESCRIPTION OF MEASURING POINT (MP)		
HEIGHT OF MP ABOVE/BELOW LAND SURFACE_		
_	WATER-LEVEL ELEVATION	
	DIAMETER OF CASING 2 75	· · · · · · · · · · · · · · · · · · ·
	GALLONS EVACUATED PRIOR TO SAMPLII	· · · · · · · · · · · · · · · · · · ·
WATER COLUMN IN WELL	· · - · · · · · · · · · · · · · · ·	
WATER COLUMN IN WELL GALLONS PER FOOT Olio ONE ONE ONE ONE ONE ONE ONE ON	Sampling Pump Intake Setting	
	(FEET BELOW LAND SURFACE)	
	the hriter	
	AMPLING DATA/FIELD PARAMETERS APPEARANCE (C 2 TEMPERATU PH -	RE_ :F/:C
	APPEARANCE (C 9- TEMPERATU - PH - osable bules, ground wo der	RE_ =F/=C
Color c / c 7 — ODOR — OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL	APPEARANCE (C 9- TEMPERATU	RE_=:F/:C
Color c / c7 - ODOR - OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL REP	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE
Color c/c7 — ODOR — OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL / LSP CONSTITUENTS SAMPLED	APPEARANCE (C 9- TEMPERATU	
Color c / c 7 — ODOR — OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE
Color c / c 7 — ODOR — OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE
Color c (c7 - ODOR - OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL REP CONSTITUENTS SAMPLED A A A A A A	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE / No; 2 Soy
Color c (c7 - ODOR - OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL REP CONSTITUENTS SAMPLED A A A A A A	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE / No; 2 Soy
Color c (c7 - ODOR - OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL REP CONSTITUENTS SAMPLED A A A A A A	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE (NO) 2 SC 4
COTOR CCT - ODOR - OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL CONSTITUENTS SAMPLED ALL MARKS REMARKS FOR USE MARKS GAL./FT. 1-4"= 0	APPEARANCE (C 9 TEMPERATU PH - OSAGLE Green ground was der CONTAINER DESCRIPTION SAMPLE CONTAINER 1 L POLY (M WELL CASING VOLUMES 1.06 2" = 0.16 3" = 0.37 4" = 0	PRESERVATIVE Nos Soy 1.65
COTOR CCT ODOR — OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL CONSTITUENTS SAMPLED ALL MARKS REMARKS FOR USE MARKS GAL./FT. 1-4"= 0	APPEARANCE (C 9- TEMPERATU	PRESERVATIVE Nos Soy 1.65
COTOR CCT ODOR — OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL CONSTITUENTS SAMPLED ALL MARKS REMARKS FOR USE MARKS GAL./FT. 1-4"= 0	APPEARANCE (C 9 TEMPERATU PH - OSAGLE Green ground was der CONTAINER DESCRIPTION SAMPLE CONTAINER 1 L POLY (M WELL CASING VOLUMES 1.06 2" = 0.16 3" = 0.37 4" = 0	PRESERVATIVE Nos Soy 1.65



PROJECT/NO. South Pa	plat R	PRA	
SITE LOCATION SOLA POI	nt. 0410		
WELL NO. SPINW- 01 REF	PLICATE NO.	DATE	/11/01
WEATHER Synny 80 Til	me BEGAN 11:50	Time COMPLET	17:00
,	,		
	EVACUATION	ON DATA	
DESCRIPTION OF MEASURING POINT (MP)	Top P	ν <i>c</i>	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE_		MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW MP	80.5	WATER-LEVEL ELEVATION_	
DEPTH TO WATER BELOW MP			
•		GALLONS EVACUATED PRIOR	r to Sampling
WATER COLUMN IN WELL	40.8	CALCULATED 20.4	Actual20
GALLONS PER FOOT D.G		Sampling Pump Intak	e Setting
GALLONS IN WELL		(FEET BELOW LAND SURFACE	ː)
EVACUATION METHOD d 1 50 59	ble brile.		
COTOR ODOR 10 ~ COTOR OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL P. S. P. COMPAND MATERIAL P. S. P. COMPAND MATERIAL P. S. P. COTOR COT	APPEARANCE_	PH 6,91	_TEMPERATURE
SAMPLING METHOU AND MATERIAL	23 446 63, (67)	y susa wire	
	CONTAINER DE	SCRIPTION	-
CONSTITUENTS SAMPLED	SAMPLE CO		PRESERVATIVE
App 14 Paris	12	oly	H NO3
N.M. M. M. K.			72309
· ·			i n-
EMARKS AMPLING PERSONNEL 6 5 6 4 1	d/ K Va	le £	
	WELL CASING	VOLUMES	
GAL./FT. 1-4"=0	.05 2" = 0.	16 3" = 0.3	4" = 0.65
1-1/2"= 0		26 3-½"= 0.50	6" = 1.47
	71 94	Cons	7 (c)
	76.84	30%	16.1
	691	300(1)	14.8
CCA\FOCLS\Field Lags\Water Sampling Log.wpd	6.95	(a)16	154
1	(41)	Ore I	13.2
į	w.11	200 (W) 200 (W) 2010 2010 2010 2010 2010 2010	15.2 15.4



PROJECT/NO. South	Park	DRA	
PRUJE J. J. NO	0/A/ /-	<u>/ /~/</u> //	
SITE LOCATION SOLA PO WELL NO. SPAN-02 F	100 6410		4-11-0
WELL NO.	REPLITATE NO.	UAIE	7-1/201
WEATHER 407 301 1	fime BEGAN /5.	Time Comp	LETED 15.50
	EVACUATI		
DESCRIPTION OF MEASURING POINT (MP)	Topp	VC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE		MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW MP_	84.5	WATER-LEVEL ELEVATION	ON
DEPTH TO WATER BELOW MP	49.2	DIAMETER OF CASING_	2 10
		GALLONS EVACUATED PI	RIOR TO SAMPLING
WATER COLUMN IN WELL	34,3	CALCULATED 17	7 Actual /8
GALLONS PER FOOT D.16		Sampling Pump Int	
GALLONS IN WELL		(FEET BELOW LAND SURI	FACE)
EVACUATION METHOD L Sp 0 50	able brile	<u></u>	
	SAMPI ING NATAÆII	I N PARAMETERS	
	SAMPLING DATA/FII		
Color CL7 ODOR - OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL P.S.	APPEARANCE_	c/19/	TEMPERATURE 15, 9 F/C
OTHER (SPECIFIC ION: OVA: HNU: ETC.)	11/5	all 6 G	
SAMPLING METHOD AND MATERIAL (C.C.)	essable bules	graced was	Že
		,	
	CONTAINER DI	SCRIPTION	-
CONSTITUENTS SAMPLED	SAMPLE C		PRESERVATIVE
App H Mohils	12/	Poly	H2SC4
///, MR //U, MR			
			
_			
REMARKS SAMPLING PERSONNEL G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C G S C S	1d/. K Va	1, 4	
JA FEING FERSONNEL	1-4		
	NELL CACTAC	VOLUME C	
GAL./FT. 1-½"=	WELL CASING	3" = 0.37	4" = 0.65
7		26 3-1;"= 0.50	6" = 1.47
	PH	Timp oc	CONS W
	11.6	22.1	977
	8.76	17.3	1(01
: CCA\TOOLS\Field Lage\Water Sampling Log.wpd	6139	17.0	1115
	6,46	16.7	1131
i	. 47	15.9	11.65



) _ 0	001	
PROJECT/NO. South			
SITE LOCATION SOLA POLICELL NO. 5140 - 03 RE	15, 0410		
RELL NO. SVAO - 03 RE	PLICATE NO.	DATE 	10'21
EATHER cloudy 80% Ti	ime BEGAN <u>9:5</u>	Time COMPLET	ED /0.28
,			
	_	ION DATA	
ESCRIPTION OF MEASURING POINT (MP)	•		
EIGHT OF MP ABOVE/BELOW LAND SURFACE_		MP ELEVATION	
OTAL SOUNDED DEPTH OF WELL BELOW MP_			
PTH TO WATER BELOW MP	45.5	DIAMETER OF CASING	2 in
	2.4	GALLONS EVACUATED PRIOR	
ater Column in Well		CALCULATED 16,3	Actual
ALLONS PER FOOT D.16		Sampling Pump Intak	ce Setting
LLLONS IN WELL			E)
ACUATION METHOD	ble brile		
THER (SPECIFIC ION: OVA; HNU; ETC.) NDUCTIVITY - UMHOS/CM		-	
Coverage Coverage	CONTAINER D		Preservative
CONSTITUENTS SAMPLED	SAMPLE (
Nima Wink	4	Poly	H NO; H 2 S C 4
			
			
MARKS			
MPLING PERSONNEL 4 School	coll, K Va	oli £	
			
CAL /FT 3 1.4 C	WELL CASING 1.06 2" = 0		4" = 0.65
GAL./FT. 1-¼"= (1-½"= ($\begin{array}{cccccccccccccccccccccccccccccccccccc$	6" = 1.47
1-7 -	. M	Cond as	Timp oc
/	5.78	858	14,3
	6,21]
CA\TOOLS\Fletd Logs\Water Sampling Log.wpd	6.32	879 727	14.8
and when	6.61	8 310	14.1
	6. 101	823	(4,7



C 21 D	- s	DC A	
PROJECT/NO. South	plas F	<u> </u>	
WELL NO. SPAW-04 REF	15, 0410		i-17-1
WELL NO. SIAW-09 REF	PLICATE NO.	DATE	2:44
WEATHER cloudy 80% Til	the Began $8.\alpha$	Time COMPLETI	ED <u>8.40</u>
	51461147	ON DATA	
Danis and D. (1981)	EVACUATI		
DESCRIPTION OF MEASURING POINT (MP)			
HEIGHT OF MP ABOVE/BELON LAND SURFACE_			
TOTAL SOUNDED DEPTH OF WELL BELOW MP			· · · · · · · · · · · · · · · · · · ·
DEPTH TO WATER BELOW MP	10.3		
	2 . 7	GALLONS EVACUATED PRIOR	
WATER COLUMN IN WELL	30,7		
GALLONS PER FOOTO.16		Sampling Pump Intak	e Setting
GALLONS IN WELL			[)
EVACUATION METHOD 2 (50 59	ble brile		
Color(corODOROTHER (SPECIFIC ION: OVA: HNU: ETC.)_ CONDUCTIVITY - UMHOS/CM	APPFARANCE	eld Parameters class ph G. 59	TEMPERATURE / 5. / FC
SAMPLING METHOD AND MATERIAL PUSP.	osable briles	ground wo te	
	_		-
•	CONTAINER D		December
CONSTITUENTS SAMPLED	SAMPLE C		PRESERVATIVE HNOS
Nima IN. M. K	(no ly	Hasoy
REMARKS			
SAMPLING PERSONNEL 19 School	all, K Va	11 6	
GAL./FT. 1-4"= 0 1-4"= 0	-		4" = 0.65 6" = 1.47
	11/1	1 cmg oc	cond (45)
	7.05	18.5	464
	615	15.5	605
K: CCA TOOLS Field Lags Water Sampling Log. upd	- i	15.2	152
· · · · · · · · · · · · · · · · · · ·	la > 9' 1		, 443
l l	6.55	15.1	642 W56



PROJECT/NO. South		0 0 4	
A .	Voiat K	VKA	
SITE LOCATION SOLA 1	out, 0410		
WELL NO. SPAW - 05	REPLICATE NO	DATE	-0
WEATHER GREAT, \$00F	Time BEGAN 11.6	D Time COMPLETED	11;20
,,			
	EVACUATI	ION DATA	
DESCRIPTION OF MEASURING POINT (MP) Top P	VC	
HEIGHT OF MP ABOVE/BELOW LAND SURF	•		
TOTAL SOUNDED DEPTH OF WELL BELOW !	MP 87.0	WATER-LEVEL ELEVATION	
DEPTH TO WATER BELOW MP	63,6	DIAMETER OF CASINGZ	- 10
		GALLONS EVACUATED PRIOR TO	SAMPLING
Water Column in Well	23,4	CALCULATED 11. 7	Actual
GALLONS PER FOOT		Sampling Pump Intake S	
GALLONS IN WELL		(FEET BELOW LAND SURFACE)_	
EVACUATION METHOD 1 5 0	sable brile		
COTOR COPE CONTROL CONDUCTIVITY - UMHOS/CM 6 COMPUTED AND MATERIAL 1	94	PH 7.58	
SAFECING FREIHOU AND PATERIAL	spossale briler	ground water	
SAFETING PETITUD AND TWIENTAL			-
CONSTITUENTS SAMPLED	CONTAINER D Sample (ESCRIPTION Container	PRESERVATIVE
	CONTAINER D Sample (ESCRIPTION Container	PRESERVATIVE HNO,
CONSTITUENTS SAMPLED	CONTAINER D Sample (ESCRIPTION	-
CONSTITUENTS SAMPLED	CONTAINER D Sample (ESCRIPTION Container	PRESERVATIVE HNO,
CONSTITUENTS SAMPLED	CONTAINER D Sample (ESCRIPTION Container	PRESERVATIVE HNO,
CONSTITUENTS SAMPLED App 14 /26 /2 /5 Al. M. M. M. M. M.	CONTAINER D SAMPLE (ESCRIPTION Container	PRESERVATIVE HNO,
CONSTITUENTS SAMPLED A A A A A A A A A A A A A A A A A A A	CONTAINER D SAMPLE (ESCRIPTION CONTAINER POLY VOLUMES 15 3" = 0.37	PRESERVATIVE HNO,
CONSTITUENTS SAMPLED A A A A A A A A A A A A A A A A A A A	CONTAINER D SAMPLE (1 4 (WELL CASING 2" = 0	ESCRIPTION CONTAINER POLY VOLUMES 15 3" = 0.37	PRESERVATIVE HNOS Na Soy 4" = 0.65
CONSTITUENTS SAMPLED A A A A A A A A A A A A A A A A A A A	WELL CASING 2" = 0.09 2-13"= 0	ESCRIPTION CONTAINER (1) (4) EVOLUMES 15 3" = 0.37 26 3-1/5" = 0.50	PRESERVATIVE H N 0; H = 0.65 5" = 1.47
CONSTITUENTS SAMPLED A A A A A A A A A A A A A A A A A A A	WELL CASING '= 0.05 2" = 0 PH	ESCRIPTION CONTAINER (7) (4) 11 (4) 12 (4) 13 (7) 14 (4) 15 (7) 16 (7) 17 (8) 18 (8) 19 (8) 10 (8)	PRESERVATIVE H NO; H = 0.65 5" = 1.47 (2 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
CONSTITUENTS SAMPLED App 14 Me 16 N. M. K. / W. M. K. REMARKS SAMPLING PERSONNEL GAL./FT. 1-14'	WELL CASING 2" = 0.05 2" = 0 PH 5.76	ESCRIPTION CONTAINER (Poly) VOLUMES 15 3" = 0.37 26 3-15" = 0.50 Temp () 15,0	PRESERVATIVE H NO H 2 SO 4 4" = 0.65 5" = 1.47 (end us 709



PROJECT/NO. SOUTH POINT R	-DRA
SITELOCATION SOUTH POINT OHI	0
WELL NO. MW-07 REPLICATE NO.	
WEATHER Time BEGAN	
EVACU	ATION DATA
DESCRIPTION OF MEASURING POINT (MP)	PVC
HEIGHT OF MP ABOVE/BELOW LAND SURFACE (ft)	MP ELEVATION (ft)
TOTAL SOUNDED DEPTH OF WELL BELOW MP (ft) 72.	O WATER-LEVEL ELEVATION (ft)
DEPTH TO WATER BELOW MP (ft) 44.	DIAMETER OF CASING (in) 2
- 7	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL_(ft) 2 7	9 CALCULATED 13.7 Actual
GALLONS PER FOOT 0.16	Sampling Pump Intake Setting
GALLONS IN WELL	(FEET BELOW LAND SURFACE)
EVACUATION METHOD disposable 19,10	
ColorODORAPPEAR OTHER (SPECIFIC ION: OVA: HNU: ETC.) ~	TEMPERATURE
CONDUCTIVITY - UMHOS/CM	PH
SAMPLING METHOD AND MATERIAL Disposable 6	ailer, grayadwarer
CONTAINE	R DESCRIPTION
CONSTITUENTS SAMPLED SAM	PLE CONTAINER PRESERVATIVE
Annough Mitertal Notes 14	- Poly Sulfure And
REMARKS Confirmation of Agric	1 01 simples
SAMPLING PERSONNEL / V9/ek	
_	SING VOLUMES
•	= 0.16 3" = 0.37 4" = 0.65 = 0.26 3-4" = 0.50 6" = 1.47



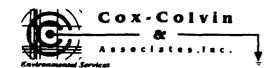
PROJECT/NO. South Point	RICA
WELL NO. SPAN-07 REPLICATE NO. S	100 4 -10-11
WELL NO. 37 - FAST THE REPLICATE NO. 31	13'17 Time Company 18'40
WEATHER OF Cloudy Time BEGAN	7 . 7 Time COMPLETED
دادی سی کریا	CHATION DATA
	CUATION DATA
——————————————————————————————————————	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION
	WATER-LEVEL ELEVATION
DEPTH TO WATER BELOW MP	7 DIAMETER OF CASING 2 in
WATER COLLANS IN WELL	GALLONS EVACUATED PRIOR TO SAMPLING
GALLONS PER FOOT 0.16	Sampling Pump Intake Setting
GALLONS IN WELL YOUT	(FEET BELOW LAND SURFACE)
EVACUATION METHOD 115posable 1	11/0-
	TA/FIELD PARAMETERS
Color Clear ODOR None APPE	ARANCE <u>Les</u> TEMPERATURE 16.0 :F/E
OTHER (SPECIFIC ION: OVA: HNU: ETC.)	oli 7.7-
SAMPLING METHOD AND MATERIAL PISCOSTAGE A	riles grand water
CONTAI	NER DESCRIPTION
•	AMPLE CONTAINER PRESERVATIVE
App 14 Property 12	Poly HNO3
REMARKS C716-1/107 - 1413/1413 45/2 SAMPLING PERSONNEL LY Sc4210/1, K	7.4° = 7.00/7.00 pH/4,05/4.00 pH
SAPPLING PERSUNNEL 19 3 CG 14 (CV)	
	ACTIVE VOLUMES
	ASING VOLUMES = 0.16 3" = 0.37 4" = 0.65
	$\frac{1}{2}$ " = 0.26 3- $\frac{1}{2}$ " = 0.50 6" = 1.47
0 14	Tomp oc Cond as
6,23	19.0 1230
432	16.2 1260
K: CCANTOCLSVField Logs\Wister Sampling Log.wpd 7 0 9	12.1 1440
7.0	
	7 14.N 1590



PROJECT/NO. South	Point R.	DRA	
WELL NO. SPMW-ON	REPLICATE NO	DATE	11/01
WEATHER Sinny 80	Time BEGAN 14:5	O Time COMPLETE	50 15:15
,			
	EVACUATIO	ON DATA	
DESCRIPTION OF MEASURING POINT (MP)			
HEIGHT OF MP ABOVE/BELOW LAND SURFACE			
TOTAL SOUNDED DEPTH OF WELL BELOW MP			
DEPTH TO WATER BELOW MP		DIAMETER OF CASING	
OCI III TO TOTICK DECON TH		GALLONS EVACUATED PRIOR	
Water Column in Well	23.1		
GALLONS PER FOOT		Sampling Pump Intak	
GALLONS IN WELL			:)
EVACUATION METHOD 2 (50 6 S			./
EVACUATION PETHOD A (-// 0 3	74 (6 # 11/6)		
OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM	CONTAINER DE	ESCRIPTION	-
CONSTITUENTS SAMPLED	SAMPLE CI	ONTAINER	PRESERVATIVE HNOZ
N.M. N.M. K	4	Poly	H2SC4
·			
CEMARKS			
AMPLING PERSONNEL 1/2 Sch. 14	, jell, K Va	1e £	
 			
GAL./FT. 1-4"=		3" = 0.37	4" = 0.65
1-1/2"=		3-½"= 0.50 (المو)	6" = 1.47
	PH	1061	Temp Si
	6.72	1434	19.2
ì	9	-	l i
CCA/TOCLS/Field Logs/Water Sampling Log.wpd	6.76	/ 48 /	1 15.7 1
į –	6.76 6.73	1401 1446	15,7 15,4
	-		



PROJECT/NO. Sour & Pa	2	DEA	
PROJECT/NO. Source Page 18	DIAG F	· / /-///	
SITE LOCATION SOLA POI	15, 6410		
WELL NO. 700 44. REI	PLICATE NO.	DATE	0'-
WEATHER BO clouds Til	me BEGAN 8.34	Time COMPLETE	10 <u>4.00</u>
•			
	EVACUAT	ION DATA	
DESCRIPTION OF MEASURING POINT (MP)	Top	VC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE_		MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW MP	62,00	WATER-LEVEL ELEVATION_	
DEPTH TO WATER BELOW MP	40.03	DIAMETER OF CASING	2 10
		GALLONS EVACUATED PRIOR	TO SAMPLING
WATER COLUMN IN WELL	12,0	CALCULATED 4	Actual
GALLONS PER FOOTO.(6 '		Sampling Pump Intake	
GALLONS IN WELL		(FEET BELOW LAND SURFACE)
EVACUATION METHOD 2 150059		<u></u>	
Color 600 ODOR — OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 1780 SAMPLING METHOD AND MATERIAL 1590	APPEARANCE	PH Y. 73	TEMPERATURE 138 F/C
			-
Coverage Coverage	CONTAINER D		Oppositive
CONSTITUENTS SAMPLED		CONTAINER Poly	PRESERVATIVE HNO3
Nima /Nima	4	Poly	Hasoy
REMARKS Cal. Lating 1418 SAMPLING PERSONNEL Ry School	2/1413 45	7.01/7.00 pH	10.0/10.0/4
SAMPLING PERSONNEL 19 Self 2011	olf, K V:	7/14	
GAL./FT. 1-¼"= 0 1-%"= 0		G VOLUMES 0.16	4" = 0.65 6" = 1.47
	lemp oc	PH	Cord us
	14.0	4.24	1370
	13.8	y. 24	1900
K:\CCA\TOCLS\Field Lugs\Water Sampling Log.upd	13.9	4.56	1860
	13.8		1810
	13,8	4.73	1780



PROJECT/NO. SOUTH POIN	7 RA	R.A.
SITE LOCATION SOUTH POINT		
WELL NO. 146 -09 REPLICATI		
WEATHER Time BE	GAN 1/:30	Time COMPLETED /2:00
	EVACUATION	ON DATA
DESCRIPTION OF MEASURING POINT (MP)	Top	PVC
HEIGHT OF MP ABOVE/BELOW LAND SURFACE (ft)		
		WATER-LEVEL ELEVATION (ft)
DEPTH TO WATER BELOW MP (ft)		DIAMETER OF CASING (in) 2
-		GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL (ft)	22,0	CALCULATED Actual
GALLONS PER FOOT 0.16		·
GALLONS IN WELL		(FEET BELOW LAND SURFACE)
EVACUATION METHOD disposable	19,11-	
ColorODOROTHER (SPECIFIC ION; OVA; HNU; ETC.)CONDUCTIVITY - UMHOS/CM	APPEARANCE_	TEMPERATUREF/°C
SAMPLING METHOD AND MATERIAL D. SPOS	Ste bail	er groundwaker
CON	ITAINER DE	ESCRIPTION
CONSTITUENTS SAMPLED	SAMPLE CO	ONTAINER PRESERVATIVE
Annoned Mitch Noth	14	Poly Salfare And
REMARKS Confirma / Con of SAMPLING PERSONNEL K V9/0 K	bpril 0	oi simples
	WELL CASING	1
GAL./FT. 1-¼"= 0.06	2" (= 0.	.16



	- 222:	
PROJECT/NO. South POINT	KURA	
SITE LOCATION SOLA Boint	0410	
SITE LOCATION SOUND POINT WELL NO. SOMW -10 REPLICATE NO WEATHER 492 90 F Time BEGAN). MSTMSD DATE_	4-1)-01
WEATHER 497 TIME BEGAN	13:30 Time 0	OMPLETED 14:00
,,		
	EVACUATION DATA	
DESCRIPTION OF MEASURING POINT (MP)	P PVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW MP 92 🗪	WATER-LEVEL ELEV	ATION
DEPTH TO WATER BELOW MP	DIAMETER OF CASI	16 2 in
_	GALLONS EVACUATE	PRIOR TO SAMPLING
WATER COLUMN IN WELL 28	CALCULATED	1 Actual 15
WATER COLUMN IN WELL 28 GALLONS PER FOOT 0.66	Sampling Pump	Intake Setting
GALLONS IN WELL		SURFACE)
EVACUATION METHOD 2 (50 59 4 (c		
Color ((4 ODOR 10 COLOR OTHER (SPECIFIC ION: OVA; HNU; ETC.) — CONDUCTIVITY - UMHOS/CM 50 M AMPLING METHOD AND MATERIAL / 1505246	6 com gracia	
CON	TAINER DESCRIPTION	•
CONSTITUENTS SAMPLED	SAMPLE CONTAINER	PRESERVATIVE
App H Batils 1	L poly	77 /0 43
	4	H2504
	()	N2 SO4
		M2504
	\(\frac{1}{1}\)	Masoy
COMPANY	(Masoy
EMARKS AMPLING PERSONNEL 15 5 6 4 1 1 1		Masoy
SEMARKS SAMPLING PERSONNEL SCL. 1017,		Masoy
AMPLING PERSONNEL / Schoold,		
AMPLING PERSONNEL By School off, WE GAL./FT. 1-4"= 0.06	LL CASING VOLUMES 2" = 0.16 3" = 0.	200/e, KS 37 4" = 0.65
WE GAL./FT. 1-1/4"= 0.05 1-1/2"= 0.09	LL CASING VOLUMES $2" = 0.16 \qquad 3" = 0.25 \qquad 3-\frac{1}{2}" = 0.26$	37 4" = 0.65 50 6" = 1.47
AMPLING PERSONNEL By School off, WE GAL./FT. 1-4"= 0.06	LL CASING VOLUMES 2" = 0.16 3" = 0. 2-½"= 0.26 3-½"= 0. Cond (-s	37 4" = 0.65 50 6" = 1.47 1 7emp "C
AMPLING PERSONNEL	LL CASING VOLUMES 2" = 0.16 3" = 0. 2-1/2" = 0.26 3-1/2" = 0. Coal (s. 234)	200/e, KS 37 4" = 0.65 50 6" = 1.47 1 7emp 'C 17.7
WE GAL./FT. 1-1/4"= 0.06 1-1/2"= 0.09	LL CASING VOLUMES 2" = 0.16 3" = 0. 2-½"= 0.26 3-½"= 0. Cond (-s	37 4" = 0.65 50 6" = 1.47 1 7emp "C



PROJECT/NO. South	Part R	PRA	
\dot{C} A Q_{-}			
WELL NO. SPMW-11 RE	TO LOTE NO.	<u> </u>	1/11/00
WEATHER Cloudy 80 Ti	ing Prom 1/ 3	S Time Comput	17:00
WEATHER CIOCON GO	TIME DEGAN	- I fille Curples	100
	EVACUATI	ON DATA	
DESCRIPTION OF MEASURING POINT (MP)	Top P	VC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE		MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW MP_	92.0	WATER-LEVEL ELEVATION	
DEPTH TO WATER BELOW MP	49.74	DIAMETER OF CASING	2 10
-		GALLONS EVACUATED PRIO	
WATER COLUMN IN WELL	42.3	CALCULATED 21, 2	Actual Zi
GALLONS PER FOOT O.16		Sampling Pump Intal	ke Setting
GALLONS IN WELL		(FEET BELOW LAND SURFAC	£)
EVACUATION METHOD 2 (50059	ble brile		
Color ODOR WA OTHER (SPECIFIC ION: OVA: HNU: ETC.)_ CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL	osable bailes	ph graund was	·
	CONTAINER D	ESCRIPTION	_
CONSTITUENTS SAMPLED	SAMPLE (CONTAINER Calla	Preservative H No:
Nink Mink	(Mascy
REMARKS	- / V I		
SAMPLING PERSONNEL 1/2 Sch. 30	id, K va	11.4	
GAL./FT. 1-¼"= (.16 3" = 0.37	
1-1/2"= (.26 3-½"= 0.50	6" = 1.4?
	(10)	470	17.9
	6.60	538	15.7
KACCATOO! Sealed and Marie Committee Landing	5.59	<i>20</i> 1	1517
K:\CCA\TOOLS\Field Logs\Water Sampling Log.wpd	5.62	[p] \$	15.7
	5,73	547	15.4



	0 - 0	001	
PROJECT/ NO. South	rojat K	VILAT	
SITE LOCATION Soul 4	oint, 0410		1-
SITE LOCATION SOLA 5 WELL NO. MW-12	REPLICATE NO.	DATE	- 12-01
WEATHER 80°F; clouds	Time BEGAN 9 5	Time COMPLET	ED 10, 20
•			
	EVACUATI	ON DATA	
DESCRIPTION OF MEASURING POINT (MP) Top P	VC	
HEIGHT OF MP ABOVE/BELOW LAND SURF		MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW I	4P 92.0	WATER-LEVEL ELEVATION_	
DEPTH TO WATER BELOW MP			
		GALLONS EVACUATED PRIOR	r to Sampling
WATER COLUMN IN WELL	32.5	CALCULATED / L. 3	Actual 17
GALLONS PER FOOT		Sampling Pump Intak	
GALLONS IN WELL :		(FEET BELOW LAND SURFACE	E)
EVACUATION METHOD - 1 (500	sable brile		
	SAMPLING DATA/FIL	ELD PARAMETERS	
Color acar - 61- 0000 =	ADDEADANCE	6-10	TEMPEDATURE / Y. P. SECT
Color <u>9/9y-6/a</u> Odor — Other (specific ion: OVA: HNU: et Conductivity - umhos/cm Sampling Method and Material	C.)	7	
CONDUCTIVITY - UMHOS/CM	1121	PH 6.81	
SAMPLING METHOD AND MATERIAL	spossace briles	graund work	
		CONTION	-
CONSTITUENTS SAMPLED	CONTAINER DI SAMPLE C		Preservative
Ace 14 Batils		Poly	HNOZ
N.M. N.M. K	(Kascy
REMARKS			
SAMPLING PERSONNEL 19 Sca	mid, K Va	le &	
CN /FT 1 1/	WELL CASING	VOLUMES 16 3" = 0.37	4" = 0.65
•	• • • • • • • • • • • • • • • • • • • •	26 3-½"= 0.50	6" = 1.47
•	DH	TIME	Cand (45)
	6,93	16.0	1138
	7.09	14.9	1112
CCANTOCLS/Field Lugs/Water Sampling Log.wpd	5. 20 2	14,9	1040
The second secon	6.72	14.8	1121
1	681	14,8	1,5-1



PROJECT/NO. Soy 16	Point R	PRA	
WELL NO. SPIMW-13	REPLICATE NO.	DATE	1/12/01
WEATHER Classy 80	Time BEGAN 8:5	o Time COMPLET	ED 9:30
	· · · · · · · · · · · · · · · · · · ·		
	EVACUAT	ION DATA	
DESCRIPTION OF MEASURING POINT (M	P) Top p) v C	
HEIGHT OF MP ABOVE/BELOW LAND SUR		MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW		WATER-LEVEL ELEVATION	
DEPTH TO WATER BELOW MP	110 =0	DIAMETER OF CASING	
DEFIN TO THATER DECOM TH		GALLONS EVACUATED PRIOR	
Harro Course to like	42.7	-	Actual
WATER COLUMN IN WELL GALLONS PER FOOT O.G			
		Sampling Pump Intak	
GALLONS IN WELL		(FEET BELOW LAND SURFAC	Ł/
EVACUATION METHOD 2 (50 C	1594LC 471/C		
Color Clear Odor OTHER (SPECIFIC ION: OVA: HNU: E CONDUCTIVITY - UMHOS/CM SAMPLING METHOD AND MATERIAL	APPEARANCE 726 15905166 6116	ph 7.52 , graund wax	TEMPERATURE 7 TO THE
	CONTAINER D	AFSCRIPTION	
CONSTITUENTS SAMPLED		CONTAINER	PRESERVATIVE
MANGE /N. M.	12	Poly	H Nos
REMARKS GAMPLING PERSONNEL 4 Sca	anid KV.	ele £	
	,		
	WELL CASIN	G VOLUMES	
GAL./FT. 1-%	"= 0.06 2" = 0		4" = 0.65
1-1/2	$"=0.09$ $2-\frac{1}{2}"=0$		6" = 1.47
	P	Cond	Temp C.
	7.16 7.46	720 746	15.7
	7,53	731	14.7
:\CCA\TOCLS\Field Logs\Water Sampling Log.wpd	7.54	756	14.6
	7.52	726	14.60



PROJECT/NO. South Point	
	- RDRA
SITE LOCATION SOLA Point	0 DATE
WELL NO. <u>SPOB-12R</u> REPLICATE NO	0 DATE
WEATHER Party Summy 80 Time BEGAN	
, ,	
ı	EVACUATION DATA
DESCRIPTION OF MEASURING POINT (MP)	P PVC
EIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION
OTAL SOUNDED DEPTH OF WELL BELOW MP 92.	O WATER-LEVEL ELEVATION_
DEPTH TO WATER BELOW MP	85 DIAMETER OF CASING 2 10
	GALLONS EVACUATED PRIOR TO SAMPLING
LATER COLUMN IN WELL	/ CALCULATED 20,5 Actual 21
ALLONS PER FOOTO.(6	Sampling Pump Intake Setting
ALLONS IN WELL	(FEET BELOW LAND SURFACE)
VACUATION METHOD 115posalle	
ONDUCTIVITY - UMHOS/CM	99 PH (.71
CONDUCTIVITY - UMHOS/CM	APPEARANCE NON-TURBIO TEMPERATURE \$/6,1 GG PH 6.71 62169 902600 Wy Re
CONTINUENTS SAMOLED	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONTINENTS SAMOLED	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONTITUENTS SAMPLED	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONTINENTS SAMOLED	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONSTITUENTS SAMOLED	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONTITUENTS SAMPLED App 14 12 15 15 Al Mark 10, m. Re	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONTITUENTS SAMPLED App 14 12 15 15 Al Marks	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (Ma Soy
CONSTITUENTS SAMOLED	TAINER DESCRIPTION SAMPLE CONTAINER PRESERVATIVE
CONTITUENTS SAMPLED LONG TO THE CONTINUENTS SAMPLED LONG TO THE CONTINUENTS SELECTION OF THE CONTINUE	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (1 H2SCy K2SCy
CONSTITUENTS SAMPLED App 14 12 15 15 I MARKS MAPLING PERSONNEL WEL WEL	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (Ma Soy
CONTITUENTS SAMPLED CONTITUEN	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (1 Poly (2 Poly (3 PRESERVATIVE H Nog (4 So y LL CASING VOLUMES 2" = 0.16 3" = 0.37 4" = 0.65 2-½" = 0.26 3-½" = 0.50 6" = 1.47 °
CONTITUENTS SAMPLED CONTITUEN	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (1 LL CASING VOLUMES $2" = 0.16$ $3" = 0.37$ $4" = 0.65$, $2-\frac{1}{2}" = 0.26$ $3-\frac{1}{2}" = 0.50$ $6" = 1.47$ $2 = 0.68$
CONTITUENTS SAMPLED App 14 12 15 1 AND 12 10 15 MARKS MPLING PERSONNEL GAL./FT. 1-14"= 0.05 1-12"= 0.09	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (1 L CASING VOLUMES $2'' = 0.16$ $3'' = 0.37$ $2-1/2'' = 0.26$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$ $3-1/2'' = 0.50$
CONTITUENTS SAMPLED CONTITUEN	TAINER DESCRIPTION SAMPLE CONTAINER L Poly (1 L CASING VOLUMES $2'' = 0.16$ $3'' = 0.37$ $4'' = 0.65$ $2^{-1}/2^{-1} = 0.26$ $3^{-1}/2^{-1} = 0.50$ $6'' = 1.47^{-2}$ LL CASING VOLUMES $2'' = 0.16$ $3'' = 0.50$ $6'' = 1.47^{-2}$ $2^{-1}/2^{-1} = 0.26$ $3^{-1}/2^{-1} = 0.50$ $6'' = 1.47^{-2}$ 10.8 10.0



PROJECT/NO. Sour G SITE LOCATION Sour G NELL NO. SPOB - 34	Point R	DRA	
SITE LOCATION Sound	oint, 0410		
WELL NO. <u>SPOB - 34</u>	REPLICATE NO.	OATE	1-15-01
NEATHER BOOK -/	Time BEGAN	.30 Time COMPLE	TED 12.00
/			
	EVACUAT	ION DATA	
DESCRIPTION OF MEASURING POINT (MP)	Top F	ν <u>ς</u>	
EIGHT OF MP ABOVE/BELOW LAND SURFA	Œ	MP ELEVATION	
TOTAL SOUNDED DEPTH OF WELL BELOW ME DEPTH TO WATER BELOW MP	82,0	WATER-LEVEL ELEVATION	···-
EPTH TO WATER BELOW MP	47.1	DIAMETER OF CASING	2 10
		GALLONS EVACUATED PRI	OR TO SAMPLING
NATER COLUMN IN WELL	34.9	CALCULATED_17	Actual / 8_
GALLONS PER FOOT 0.6		Sampling Pump Inta	
SALLONS IN WELL .			ACE)
EVACUATION METHOD 1 (500)			
olor 5/. 6/~ ODOR THER (SPECIFIC ION: OVA: HNU: ETC. ONDUCTIVITY - UNHOS/CM LAMPLING METHOD AND MATERIAL C.S.	posable bule	ground was	<u>~</u>
	CONTAINER D	NESCRIPTION	-
CONSTITUENTS SAMPLED			PRESERVATIVE
CONSTITUENTS SAMPLED App 14 Crefts N. M. to [N. fo. to	12	Poly	H NO3 Ha SO4
EMARKS A			
AMPLING PERSONNEL 1/2 Sch.	midl, KVa	ele &	
	,		
	WELL CASING		
		3" = 0.37	
1-1/2"=	= 0.09 2-½"= 0	.26 3-1/2"= 0.50	T
	7,14	Cand 45	Tent oc
	7.47	996	71.6
CCA\TOCLS\Field Lugs\Water Sampling Log.wpd	·	1154	17.2
serving control and reds/master semband red/mba	7.48	1140	18.1
j	3.56	יייו ו	18.1



PROJECT/NO. South POINT RD/RD	PAGE) OF)
SITE LOCATION South Point Ohio	
WELL NO. SPMW-01 REPLICATE NO	- DATE KINGKI
	Time COMPLETED 13:15
EVACUATIO	N DATA
DESCRIPTION OF MEASURING POINT (MP) FOR FPVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION 563,90
TOTAL SOUNDED DEPTH OF WELL BELOW MP	WATER-LEVEL ELEVATION 523.01
DEPTH TO WATER BELOW MP 40.89	DIAMETER OF CASING Z"
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 1911	CALCULATED 9.2 Actual 10
GALLONS PER FOOT 0,16	Sampling Pump Intake Setting
GALLONS IN WELL 3.06	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Bailes	
SAMPLING DATA/FIEI COTOR Pale Brown ODOR None APPEARANCE	Cloudy TEMPERATURE 13.2/13.3 OF AC
OTHER (SPECIFIC ION; OVA; HNU; ETC.), CONDUCTIVITY - UNHOS/CM 429/365/340/343	out 45/6,83/6,21/6,24
SAMPLING METHOD AND MATERIAL DESCRIPTION	
1	
CONTAINER DE	SCRIPTION
CONSTITUENTS SAMPLED SAMPLE CO	PRESERVATIVE HSQUETCE
Ammerica, Notati Som Pic	ASSUR, ES
Selected Metals 1 liter Plan	HC HW3, TCL
Remarks	
SAMPLING PERSONNEL_CAC, CAL	
WELL CASING GAL./FT. 1-¼"= 0.06 2" = 0.1	VOLUMES



PROJECT/NO South Point RD/RA	PAGE
SITE LOCATION South Rain, this	
WELL NO. 30MW-02 REPLICATE N	0 DATE
WEATHER 50 Clean Time BEGAN	9:55 Time COMPLETED 10:15
, (
_	EVACUATION DATA
DESCRIPTION OF MEASURING POINT (MP)	of puc
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION 569.03
TOTAL SOUNDED DEPTH OF WELL BELOW MP	13 WATER-LEVEL ELEVATION \$19.77
DEPTH TO WATER BELOW MP	DIAMETER OF CASING 24
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL	3.69 CALCULATED 11-4 Actual 12
GALLONS PER FOOT	O.16 Sampling Pump Intake Setting
GALLONS IN WELL 3	(FEET BELOW LAND SURFACE) NA
EVACUATION METHOD Bill	
Color Nom ODOR Nome	G DATA/FIELD PARAMETERS APPEARANCE CLAS TEMPERATURE/33/13.1 F/C
Color Nom ODOR Nome	APPEARANCE CLAS TEMPERATURE/3.3//3.1 °F/C
Color Now ODOR Now OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM_768/68/68/686/68	APPEARANCE CLAS TEMPERATURE/3.3//3.1 °F/C
Color Nove ODOR Nove OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM 768/68/626/6	APPEARANCE CLAS TEMPERATURE/33/13.1 % //C
Color Nove ODOR Nove OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM_762/63/626/63 SAMPLING METHOD AND MATERIAL DISPOSALL D	APPEARANCE CLAS TEMPERATURE/33/13.1 % //C
COTOR NOR DOR NOR OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/68 SAMPLING METHOD AND MATERIAL DISPOSAGE D CONCONSTITUENTS SAMPLED	APPEARANCE CLOS TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C PRESERVATIVE
Color Nova ODOR Nova OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/8 SAMPLING METHOD AND MATERIAL DISPOSCIOL D CON CONSTITUENTS SAMPLED AMMONIA, NOTATE 2	APPEARANCE CLOS TEMPERATURE/33/13/1 OF/C 3. PH 5:75/5.8/6.06/6.77 WILLIAM WITAINER DESCRIPTION SAMPLE CONTAINER SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE
COTOR NOR DOR NOR OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/68 SAMPLING METHOD AND MATERIAL DISPOSAGE D CONCONSTITUENTS SAMPLED	APPEARANCE CLOS TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C TEMPERATURE/33/13.1 %F/C PRESERVATIVE
Color Nova ODOR Nova OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/8 SAMPLING METHOD AND MATERIAL DISPOSCIOL D CON CONSTITUENTS SAMPLED AMMONIA, NOTATE 2	APPEARANCE CLOS TEMPERATURE/33/13/1 OF/C 3. PH 5:75/5.8/6.06/6.77 WILLIAM WITAINER DESCRIPTION SAMPLE CONTAINER SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE
Color Nova ODOR Nova OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/8 SAMPLING METHOD AND MATERIAL DISPOSCIOL D CON CONSTITUENTS SAMPLED AMMONIA, NOTATE 2	APPEARANCE CLOS TEMPERATURE/33/13/1 OF/C 3. PH 5:75/5.8/6.06/6.77 WILLIAM WITAINER DESCRIPTION SAMPLE CONTAINER SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE
COTOR NOR NOR NOR OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/6/8 SAMPLING METHOD AND MATERIAL DISPOSALA D CON CONSTITUENTS SAMPLED AMMORIA, NORTH	APPEARANCE CLOS TEMPERATURE/33/13/1 OF/C 3. PH 5:75/5.8/6.06/6.77 WILLIAM WITAINER DESCRIPTION SAMPLE CONTAINER SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE
Color Nova ODOR Nova OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/68 SAMPLING METHOD AND MATERIAL DISPOSCIOLE D CON CONSTITUENTS SAMPLED AMMONIA, NOTATE Scleated Mutais	APPEARANCE CLOS TEMPERATURE/33/13/1 OF/C 3. PH 5:75/5.8/6.06/6.77 WILLIAM WITAINER DESCRIPTION SAMPLE CONTAINER SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE
COTOR NOW ODER NOW OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/6/ SAMPLING METHOD AND MATERIAL DISPOSALL D CON CONSTITUENTS SAMPLED; Ammonia, North 2 Scleated Mutais REMARKS SAMPLING PERSONNEL CAC, CLAC	APPEARANCE CLAR TEMPERATURE/3.3/13.1 OF/C 32
COTOR NOW ODER NOW OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UNHOS/CM 768/663/626/6/ SAMPLING METHOD AND MATERIAL DISPOSALL D CON CONSTITUENTS SAMPLED; Ammonia, North 2 Scleated Mutais REMARKS SAMPLING PERSONNEL CAC, CLAC	APPEARANCE CLOS TEMPERATURE/33/13/1 OF/C 3. PH 5:75/5.8/6.06/6.77 WILLIAM WITAINER DESCRIPTION SAMPLE CONTAINER SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE SO M. PRESERVATIVE



PROJECT/NO. 5.B. A RD/RA	PAGE
SITE LOCATION Sout Pant Chio	
WELL NO. 50MW-03 REPLICATE NO.	- DATE KALGOL
WEATHER 50° Claudy Time BEGAN 10:	
	ATION DATA
DESCRIPTION OF MEASURING POINT (MP)	avc
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION 563.08
TOTAL SOUNDED DEPTH OF WELL BELOW MP65	WATER-LEVEL ELEVATION 517-53
DEPTH TO WATER BELOW MP 45.5	DIAMETER OF CASING 2"
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL	CALCULATED 9.3 Actual 16
GALLONS PER FOOT 16	_ Sampling Pump Intake Setting
GALLONS IN WELL	(FEET BELOW LAND SURFACE) NA
EVACUATION METHOD Bailer	
Color Gray ODOR Work APPEARA	VFIELD PARAMETERS 129/13.1 NCE Cloudy TEMPERATURE 12.9/12.8 FAC
OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 445/447/46/1456	W 1.9/15d/6.97/713
SAMPLING METHOD AND MATERIAL DISPOSION BOOM	
•	
CONTAINE	R DESCRIPTION
	LE CONTAINER A PRESERVATIVE H, SO4, Tex
Tilestis Metis 1 leter	Plestic HND3 Ice
REMARKS_SAMPLING PERSONNEL	
	ING VOLUMES
- · · · · · · · · · · · · · · · · · · ·	= 0.16



PROJECT/NO. South Koint RD/RA	PAGE)
SITE LOCATION Suth Point Ohio	
WELL NO SPMW-OF REPLICATE NO	DATE 101561
	Time COMPLETED 16:10
EVACUATIO	IN DATA
DESCRIPTION OF MEASURING POINT (MP) Top & PVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	
	WATER-LEVEL ELEVATION 516.36
DEPTH TO WATER BELOW MP	DIAMETER OF CASING 24
17 50	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 17.59	CALCULATED 8.4 Actual 9
GALLONS PER FOOT	Sampling Pump Intake Setting
GALLONS IN WELL Z/8	(FEET BELON LAND SURFACE)
EVACUATION METHOD Brills	
OTHER (CONCLETE TON, OVA, HALL, ETC.)	Char Temperature 13.8/13.6 of/oc
CONDUCTIVITY - UMHOS/CM 546/ 379/428/459 .	
	PH 7.12/6.09/6.20/6.40
CONDUCTIVITY - UMHOS/CM_S46/379/428/459: SAMPLING METHOD AND MATERIAL_DISPOSSED. BOLLUT	рн. 7.12/6.09/6.20/6.40
SAMPLING METHOD AND MATERIAL DISPOSE LA BOTTLE	рн 7.(2/6.09/6.20/6.40
CONTAINER DE	SCRIPTION
CONTAINER DE CONSTITUENTS SAMPLED; SAMPLE CO	SCRIPTION
CONTAINER DE CONSTITUENTS SAMPLED: SAMPLE CO	SCRIPTION ONTAINER PRESERVATIVE Character
CONTAINER DE CONSTITUENTS SAMPLED; SAMPLE CO	SCRIPTION ONTAINER PRESERVATIVE Character
CONTAINER DE CONSTITUENTS SAMPLED: SAMPLE CO	SCRIPTION ONTAINER PRESERVATIVE Character
CONTAINER DE CONSTITUENTS SAMPLED: SAMPLE CO	SCRIPTION ONTAINER PRESERVATIVE Character
CONTAINER DE CONSTITUENTS SAMPLED: SAMPLE CO	SCRIPTION ONTAINER PRESERVATIVE Character
CONTAINER DE SAMPLE CO SAMPLE C	PRESERVATIVE PRESE



PROJECT/NO. South Parl RD/RA	PAGEOF
SITE LOCATION_South Point, Ohio	
WELL NO. SPMW-05 REPLICATE NO	DATE 1015/01
WEATHER 65' Dock Time BEGAN 19:20	3 Time COMPLETED
	_
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Top of P	<i>IC</i>
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION SEP. 66
TOTAL SOUNDED DEPTH OF WELL BELOW MP	WATER-LEVEL ELEVATION 520,03
DEPTH TO WATER BELOW MP	DIAMETER OF CASING 2"
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 19,37	CALCULATED 9.3 Actual (O
GALLONS PER FOOT 0.16	Sampling Pump Intake Setting
GALLONS IN WELL 3.1	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Bailer	
COlor None ODOR Non APPEARANCE	Cac TEMPERATURE 199/12 8F/C
OTHER (SPECIFIC ION; OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM 477 457 457 1471 SANGLING METIOD AND MATERIAL OLSOSSON	
CONSCITUTE CIRCOS CI.	PH 7.251 7.29 / 7.33/ 7.29
SAMPLING METHOD AND MATERIAL DISOBSOBL BOILE	PH 7.25/7.25/7.33/7.29
SAMPLING METHOD AND MATERIAL DISOBSEBLE Bailer	PH_7.25/7.25/7.33/7.29
CONTAINER DE	
CONTAINER DE CONTAINER DE	SCRIPTION PRESERVATIVE
CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CO SAMPLE C	SCRIPTION PRESERVATIVE
CONTAINER DE CONTAINER DE	SCRIPTION PRESERVATIVE
CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CO SAMPLE C	SCRIPTION PRESERVATIVE
CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CO SAMPLE C	SCRIPTION PRESERVATIVE
CONTAINER DE CONTAINER DE Sample Co Sample Co Silvettimetels REMARKS	SCRIPTION PRESERVATIVE
CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CO SAMPLE CO SAMPLE CO SCIENTIAL SILVETTIAL SILVETTIAL SAMPLE CO SAMPLE	SCRIPTION PRESERVATIVE
CONTAINER DE CONTAINER DE SAMPLE CO SAMPL	SCRIPTION PRESERVATIVE PLOSTICE P
CONTAINER DE CONTAINER DE Sample Co Sample Co Silvettimetels REMARKS	SCRIPTION PRESERVATIVE PRESE



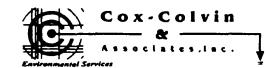
PROJECT/NO South Point RD/RA	PAGE
SITE LOCATION_South Paint, This	
WELL NO. SPMW-07 REPLICATE NO. SPMU	U-07A DATE 10/16/01
WEATHER SO Cloudy Time BEGAN 12:2	5 Time COMPLETED 12:45
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Top of IVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION 562.68
TOTAL SOUNDED DEPTH OF WELL BELOW MP	WATER-LEVEL ELEVATION
DEPTH TO WATER BELOW MP 45.15	DIAMETER OF CASING 2"
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 22. ST	CALCULATED //-/ Actual /2
GALLONS PER FOOT	Sampling Pump Intake Setting
GALLONS IN WELL 3.7	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Bell-	
SAMPLING DATA/FIE	I D PARAMETERS
Color Now ODOR LOW APPEARANCE	CLOP TEMPERATURE 14.5/14.3 °F/C
Color Now ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: FTC.) CONDUCTIVITY - UNHOS/CM 1267 1290 1299 1394	140/146
	CLOP TEMPERATURE 14.5/14.3 °F/C
Color Now ODOR Dow APPEARANCE OTHER (SPECIFIC ION; OVA; HNU; FTC.) CONDUCTIVITY - UNHOS/CM 1267/1290/1299/1304 SAMPLING METHOD AND MATERIAL 0,505c5/4 57/4	Clear TEMPERATURE 14.5/14.3 °F/C PH 7.15/7.16/7.16/717
Color Nove ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: FTC.) CONDUCTIVITY - UNHOS/CM 1267 1290 1299 1394 SAMPLING METHOD AND MATERIAL 01905 CS L DELLE CONTAINER DE	CLOP
Color Now ODOR Dow APPEARANCE OTHER (SPECIFIC ION; OVA; HNU; FTC.) CONDUCTIVITY - UNHOS/CM 1267/1290/1299/1304 SAMPLING METHOD AND MATERIAL 0,505c5/4 57/4	CLOP
Color Nove ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 1267 1290/1299/334 SAMPLING METHOD AND MATERIAL 0/305654 57/4 CONTAINER DE SAMPLE C ZSO MI (1)	CLOP
COlor Nove ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 1267/1290/1299/334 SAMPLING METHOD AND MATERIAL 0/305654 57/4 CONTAINER DE SAMPLE C SAMPLE C 250 MI	TEMPERATURE 14.5/14.3 OF /C PH 7.15/7.16/7.17 ESCRIPTION ONTAINER PRESERVATIVE HSSU4, TCL
Color Nove ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 1267 1290/1299/334 SAMPLING METHOD AND MATERIAL 0/305654 57/4 CONTAINER DE SAMPLE C ZSO MI (1)	TEMPERATURE 14.5/14.3 OF /C PH 7.15/7.16/7.17 ESCRIPTION ONTAINER PRESERVATIVE HSSU4, TCL
COTOR NOW ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM_1267/1290/1299/1354 SAMPLING METHOD AND MATERIAL OLSOSCIL DELLE CONTAINER DE SAMPLE CO SAMPLE CO SCIOLET METAL SELOCTED METAL REMARKS	TEMPERATURE 14.5/14.3 OF /C PH 7.15/7.16/7.17 ESCRIPTION ONTAINER PRESERVATIVE HSSU4, TCL
Color Nove ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 1267/1290/1299/354 SAMPLING METHOD AND MATERIAL 0/305654 57/4 CONTAINER DE SAMPLE C 250 MI (1) SCIOCTED MEPLS	TEMPERATURE 14.5/14.3 OF /C PH 7.15/7.16/7.17 ESCRIPTION ONTAINER PRESERVATIVE HSSU4, TCL
COTOR NOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM_1267/1290/1299/1344 SAMPLING METHOD AND MATERIAL 0.3005CSL 57/LA CONTAINER DE SAMPLE CO SAM	TEMPERATURE 14.5/14.3 of /C PH 7.16/7.16/7.17 ESCRIPTION ONTAINER PRESERVATIVE HSTURY, ICA TOSIC AND TEMPERATURE 14.50/4, ICA TOSIC AND TEMPERATURE 14.50/4, ICA TOSIC TOS
COTOR NOW ODOR LOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM_1267/1290/1299/1354 SAMPLING METHOD AND MATERIAL OLSOSCIL DELLE CONTAINER DE SAMPLE CO SAMPLE CO SCIOLET METAL SELOCTED METAL REMARKS	TEMPERATURE 14.5/14.3 of /C PH 7.16/7.16/7.7 ESCRIPTION ONTAINER PRESERVATIVE HSSUC HOSIC VOLUMES



PROJECT/NO. South GIAT RORD	PAGE OF
SITE LOCATION South Point Chio	
WELL NO. SPMW-08 REPLICATE NO.	DATE 101601
WEATHER SS Claudy Time BEGAN 9:	ZOTIME COMPLETED 9:40
EVACUA	TION DATA
DESCRIPTION OF MEASURING POINT (MP) Too of PV	۷.
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATIONS65.49
TOTAL SOUNDED DEPTH OF WELL BELOW MP64	WATER-LEVEL ELEVATION 520.95
DEPTH TO WATER BELOW MP	
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 19.46	CALCULATED 9.3 Actual 16
GALLONS PER FOOT O.16	Sampling Pump Intake Setting
GALLONS IN WELL 3.11	(FEET BELOW LAND SURFACE)
EVACUATION METHOO BK	
SAMPLING DATA/	CICI N DADAMETEDS
	FIELD PARAMETERS 12.7/12.5
Color Now ODOR Now APPEARANCE	12.1/12.5 E Clear TEMPERATURE 12.9/12.8 of 16
Color Now ODOR NOW APPEARANCE OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UMHOS/CM 858/918/93/910	12.1/12.5 E Clear TEMPERATURE 12.9/12.8 of 16
	12.1/12.5 E Clear TEMPERATURE 12.9/12.8 of 16
Color Now ODOR NOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 258/918/936/910 SAMPLING METHOD AND MATERIAL VISCOSCOL BOWN CONTAINER	12.1/12.5 E Clear TEMPERATURE 12.9/12.8 of 16
Color Now ODOR NOW APPEARANCE OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UMHOS/CM 258/918/936/910 SAMPLING METHOD AND MATERIAL VISCOSCOL BOWN CONTAINER	TEMPERATURE 12.9/12.8 of /6 PH 5.99/6:26/6, 26/6, 28 DESCRIPTION CONTAINER PRESERVATIVE
COTOR NOW APPEARANCE OF CONTAINER CONSTITUENTS SAMPLED SAMPLED SOME APPEARANCE OF CONTAINER CONTAINER SAMPLED SAMPL	TEMPERATURE 12.9/12.8 of /6 PH 5.99/6:26/6, 26/6, 28 DESCRIPTION CONTAINER PRESERVATIVE
COTOR NOW APPEARANCE OF CONTAINER CONSTITUENTS SAMPLED SAMPLED SOME APPEARANCE OF CONTAINER CONTAINER SAMPLED SAMPL	TEMPERATURE 12.9/12.8 of /C PH 5.99/6:26/6.28 DESCRIPTION CONTAINER PRESERVATIVE H.SO4. T.C.
COTOR NOW APPEARANCE OF CONTAINER CONSTITUENTS SAMPLED SAMPLED SOME APPEARANCE OF CONTAINER CONTAINER SAMPLED SAMPL	TEMPERATURE 12.9/12.8 of /C PH 5.99/6:26/6.28 DESCRIPTION CONTAINER PRESERVATIVE H.SO4. T.C.
COTOR NOW APPEARANCE OF CONTAINER CONDUCTIVITY - UMHOS/CM 858/918/936/910 SAMPLING METHOD AND MATERIAL VISCOSOL BOILE CONTAINER CONTAINER SAMPLED SAMP	TEMPERATURE 12.9/12.8 of /C PH 5.99/6:26/6.28 DESCRIPTION CONTAINER PRESERVATIVE H.SO4. T.C.



PROJECT/NO South Point RD/RA	PAGE)OF)
SITE LOCATION Swith Asiation has	
WELL NO. SPMW-09 REPLICATE NO	DATE 101501
WEATHER 70° Sunny Time BEGAN 15:25	Time COMPLETED 15:40
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Top of PVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION
TOTAL SOUNDED DEPTH OF WELL BELOW MP_\$7.5	WATER-LEVEL ELEVATION 520,87
DEPTH TO WATER BELOW MP 43.78	DIAMETER OF CASING Z
DEPTH TO WATER DECOM TH	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 13, 72	CALCULATED LA LA ACTUAL SAFETING
GALLONS PER FOOT O. 14	Sampling Pump Intake Setting
GALLONS IN WELL 2.2	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Barby	
CAMPING BATA FIF	
Color None ODOR None APPEARANCE_	ID PARAMETERS 12.8 12.4 Clar Temperature 15.5/13.7
Color None ODOR None APPEARANCE_	Clar
Color None ODOR None APPEARANCE_	ClarTEMPERATURE
-	ClarTEMPERATURE
Color None ODOR None APPEARANCE_	ClarTEMPERATURE
COTOR LONG ODOR APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 679/543/63/536 SAMPLING METHOD AND MATERIAL DISCOSTAL LOGIC CONTAINER DE CONTAINER DE	
COTOR CONTAINER DE CONSTITUENTS SAMPLED COTOR CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE	TEMPERATURE IS.S/13 FOC PH S.36 S.25 S.16 S.20 ESCRIPTION DATAINER DATAINER ZSO MI PLAT. H. SO4 , I S.20
COTOR CONTAINER DE CONSTITUENTS SAMPLED COTOR CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE	
COTOR CONTAINER DE CONSTITUENTS SAMPLED COTOR CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE	TEMPERATURE IS.S/13 FOC PH S.36 S.25 S.16 S.20 ESCRIPTION DATAINER DATAINER ZSO MI PLAT. H. SO4 , I S.20
COTOR CONTAINER DE CONSTITUENTS SAMPLED COTOR CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE	TEMPERATURE IS.S/13 FOC PH S.36 S.25 S.16 S.20 ESCRIPTION DATAINER DATAINER ZSO MI PLAT. H. SO4 , I S.20
COTOR CONTAINER DE CONSTITUENTS SAMPLED COTOR CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE CONTAINER DE	TEMPERATURE IS.S/13 FOC PH S.36 S.25 S.16 S.20 ESCRIPTION DATAINER DATAINER ZSO MI PLAT. H. SO4 , I S.20
COTOR NOR APPEARANCE OTHER (SPECIFIC ION: OVA: HNU; ETC.) CONDUCTIVITY - UNHOS/CM 679/543/631/536 SAMPLING METHOD AND MATERIAL DISCRETCH LOCK CONTAINER DE CONTAINER DE LITAT, Amnormas SELETED LITATION REMARKS	TEMPERATURE IS.S/13 FOC PH S.36 S.27 S.16 S.20 ESCRIPTION DINTAINER ZSO MAI PART H. SO4 I Free HND2 HND2



PROJECT/NO South Point RD/RA	PAGE
SITE LOCATION Jouth Point, Ohio	
	marks DATE 10/16/01
	Time COMPLETED
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Top of PVC	·
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION SES. 26
TOTAL SOUNDED DEPTH OF WELL BELOW MP 27.3	WATER-LEVEL ELEVATION 521.49
DEPTH TO WATER BELOW MP	DIAMETER OF CASING 2"
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL	CALCULATED Actual
GALLONS PER FOOT O.16	Sampling Pump Intake Setting
GALLONS IN WELL 3.69	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Boile	
	
SAMPLING DATA/FIE	ELD PARAMETERS 12:6/12.C
Color Brown ODOR Now APPEARANCE	Cloudy TEMPERATURE 12.4/12.4 OF AC
OTHER (SPECIFIC ION: OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM 339/343/346	Tell Boll and Company
CONDUCTIVITY - UNHOS/CM 339/343/346/346 SAMPLING METHOD AND MATERIAL DISOUSCH GULL	PH 6.34/6.29/6.49/6.30
SAFECING PICTHOU AND PIATERIAL DISSESSED CONTROL	
CONTAINER DI	CCDIDTION
GONSTITUENTS SAMPLED: SAMPLE C	
Ammona, Nilvati 250 M	Ploshi Hosoy, Toe
Selected Metals 1 lets Pl	Caric HNOS Fee
	-,
Demove MS/408D	
REMARKS M3/M3D SAMPLING PERSONNEL CAC GAC	
	VOLUMES
SAMPLING PERSONNÉL CAC GAC	16 3" = 0.37 4" = 0.65



PROJECT/NO. South Hold RD/RA	PAGE 0F
SITE LOCATION South Pant, Ohro	
·	DATE
WEATHER 70 SURAN Time BEGAN 17	
EVACU	ATION DATA
	V C
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION S65.82
TOTAL SOUNDED DEPTH OF WELL BELOW MP 62.2	
DEPTH TO WATER BELOW MP	DIAMETER OF CASING 2"
DEFINITO WATER OCCORTIN	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 11.64	_ CALCULATED_5.6 Actual_6
GALLONS PER FOOT	
GALLONS IN WELL 1,9	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Ball	(TEE) DECOM CARD SOM NEE/
E PROCEITOR THE THOU	
SAMPLING DATA	/FIELD PARAMETERS
	1,10,101
Color Pole Brown ODOR None APPEARA	NCE Clarky TEMPERATURE 13,9/13.9 OF CO
Color Pole Brown ODOR None APPEARAN OTHER (SPECIFIC ION; OVA; HNU; JETC.) CONDUCTIVITY - UMHOS/CM_362/364/364/366	NCE Clarky TEMPERATURE 13,9/13.9 OF PC
Color Pole Brown ODOR None APPEARA	NCE Clarky TEMPERATURE 13,9/13.9 of C
COTOR POLL BOOM 000R NON APPEARAND OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UMHOS/CM 362/364/364/366 SAMPLING METHOD AND MATERIAL DESCRIPTION DOCUMENTS	PH 5.88/5.25/5.25/5.25
COTOR POL BOUN (DOR NON APPEARA) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 362/364/364/364/366 SAMPLING METHOD AND MATERIAL DISPOSIOL BOX	PH 5.88/5.25/5:25
COTOR POLL BOOM 000R NON APPEARAN OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 362/364/364/364/366 SAMPLING METHOD AND MATERIAL DISPOSITION CONTAINER CONSTITUENTS SAMPLED: SAMPLED	PH 5.88/5.25/5:25
COlor Pole Brown (DOOR None Appeara) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 362 364 364 366 SAMPLING METHOD AND MATERIAL DISPOSED BOX CONTAINER CONSTITUENTS SAMPLED AMMONIS HIPLED SOM	TEMPERATURE 13.9/13.9 OF CO PH 5.88/5.25/5.25/5.25 R DESCRIPTION LE CONTAINER PRESERVATIVE LE COLL. TELE
COlor Pole Brown (DOOR None Appeara) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 362 364 364 366 SAMPLING METHOD AND MATERIAL DISPOSED BOX CONTAINER CONSTITUENTS SAMPLED AMMONIS HIPLED SOM	TEMPERATURE 13.9/13.9 of CO PH 5.88/5.25/5.25/5.25/ R DESCRIPTION LE CONTAINER PRESERVATIVE
COlor Pole Brown (DOOR None Appeara) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 362 364 364 366 SAMPLING METHOD AND MATERIAL DISPOSED BOX CONTAINER CONSTITUENTS SAMPLED AMMONIS HIPLED SOM	TEMPERATURE 13.9/13.9 of CO PH 5.88/5.25/5:25 R DESCRIPTION LE CONTAINER PRESERVATIVE LE COUTAINER PRESERVATIVE
COlor Pole Brown (DOOR None Appeara) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 362 364 364 366 SAMPLING METHOD AND MATERIAL DISPOSED BOX CONTAINER CONSTITUENTS SAMPLED AMMONIS HIPLED SSO M	TEMPERATURE 13.9/13.9 of CO PH 5.88/5.25/5:25 R DESCRIPTION LE CONTAINER PRESERVATIVE LE COUTAINER PRESERVATIVE
COTOR POL BOWN (DOR NOW APPEARA) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 362/364/384/3864/3864/3864/3864/3864/3864/3	TEMPERATURE 13.9/13.9 of CO PH 5.88/5.25/5:25 R DESCRIPTION LE CONTAINER PRESERVATIVE LE COUTAINER PRESERVATIVE
COTOR Pole Brown (DOOR None Appeara) OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM 362/364 364 366 SAMPLING METHOD AND MATERIAL DIPOSIOL BOX CONTAINER CONSTITUENTS SAMPLED AMMONIS NAME SSO M SAGETAI MODELS	TEMPERATURE 13.9/13.9 of CO PH 5.88/5.25/5:25 R DESCRIPTION LE CONTAINER PRESERVATIVE LE COUTAINER PRESERVATIVE
COTOR POL BOUN OOR NOW APPEARAN OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UNHOS/CM_362/364/364/366 SAMPLING METHOD AND MATERIAL DISPOSED BOOK CONTAINER CONSTITUENTS SAMPLED SAMPLED SAMPLED SOM SAMPLING METHOD SAMPLED SOM SAMPLED SAMPLED SAMPLED SAMPLED SOM SAMPLED SAM	TEMPERATURE 13.9 13.9 of CO PH 5.88/5.25/5.25/5.25 R DESCRIPTION LE CONTAINER PRESERVATIVE PLOSICE PLOSIC
COTOR POL Brown ODOR NON APPEARAN OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM_362/364/364/366 SAMPLING METHOD AND MATERIAL DISPOSED LA BOX CONTAINER CONSTITUENTS SAMPLED SAMP AMMONIS LATER SAMPLED SAMP SSO M SAMPLING PERSONNEL CAC, GAC WELL CAS	TEMPERATURE 13.9/13.9 of CO PH 5.88/5.25/5:25 R DESCRIPTION LE CONTAINER PRESERVATIVE LE COUTAINER PRESERVATIVE



PROJECT/NO. South Point RD/RA SITE LOCATION South Point Ohio WELL NO. SPMW-IZ REPLICATE NO. — WEATHER 70° SURRY TIME BEGAN 16'2	Time COMPLETED 6:40
EYACUATI	ON DATA
DESCRIPTION OF MEASURING POINT (MP) 5 PVC HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATIONS66.08
TOTAL SOUNDED DEPTH OF WELL BELOW MP62.2_	WATER-LEVEL ELEVATION_516,23
DEPTH TO WATER BELOW MP 49.82	DIAMETER OF CASING Z"
WATER COLUMN IN WELL GALLONS PER FOOT GALLONS IN WELL EVACUATION METHOD GALLONS DESCRIPTION GALLONS DESCRIPTI	GALLONS EVACUATED PRIOR TO SAMPLING CALCULATED 5.9 Actual Sampling Pump Intake Setting (FEET BELOW LAND SURFACE)
COTOR POLICION: ODOR NON APPEARANCE OTHER (SPECIFIC ION: OVA; HNU; ETC.) CONDUCTIVITY - UMHOS/CM 650/635/636/633 SAMPLING METHOD AND MATERIAL 1013005001 123005001	
Ammonia Nitroti 250 M	ESCRIPTION CONTAINER PLASTIC PLOSTIC UN03
REMARKS_SAMPLING PERSONNEL_CAS, CAS	
= = =	3 VOLUMES .16 3" = 0.37 4" = 0.65 .26 3-4" = 0.50 6" = 1.47



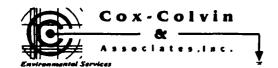
PROJECT/NO. South Point RD/RA	PAGE
SITE LOCATION South PRINT Ohio	
WELL NO. SPMW-13 REPLICATE NO	DATE 10 15 0 1
WEATHER 70° SUNNY TIME BEGAN 16:42	
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Top of PVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATIONS65.9(
TOTAL SOUNDED DEPTH OF WELL BELOW MP 68.2	WATER-LEVEL ELEVATION 516,48
DEPTH TO WATER BELOW MP 49.43	DIAMETER OF CASING 2"
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL 18.77	CALCULATED 9 Actual 10
GALLONS PER FOOTO.16	Sampling Pump Intake Setting
GALLONS IN WELL 3.0	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Bailer	
SAMPLING DATA/FIE	14,21,121
COTOT TEL Brown ODOR Now APPEARANCE	Cloudy TEMPERATURE (3.5/13.5 of 60)
OTHER (SPECIFIC ION: OVA; HNU; ETC.) CONDUCTIVITY - UMHOS/CM 456) 461/461/462	, ,
	, ,
OTHER (SPECIFIC ION: OVA; HNU; ETC.) CONDUCTIVITY - UMHOS/CM 456) 461/461/462	, ,
OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UMHOS/CM 456 46 /46 /46 /46 /46 /46 /46 /46 /46 /46	PH_7.28/7.22/7.24/7.79
OTHER (SPECIFIC ION: OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 456 46 46 46 46 46 46 46 46 46 46 46 46 46	PH_7.28/7.22/7.24/7.79
OTHER (SPECIFIC ION; OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 456) 461/461/462 SAMPLING METHOD AND MATERIAL DISPOSED BOWLE CONTAINER DE SAMPLE CO SAMPLE CO CONTAINER DE	PH 7.28/7.22/7.24/7.79 SCRIPTION PRESERVATIVE PAIC L
OTHER (SPECIFIC ION; OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 456) 461/461/462 SAMPLING METHOD AND MATERIAL DISPOSED BOWN CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CO TO MINISTER DE	PH 7.28/7.22/7.24/7.79 SCRIPTION DITAINER PRESERVATIVE
OTHER (SPECIFIC ION; OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 456) 461/461/462 SAMPLING METHOD AND MATERIAL DISPOSED BOWLE CONTAINER DE SAMPLE CO SAMPLE CO CONTAINER DE	PH 7.28/7.22/7.24/7.79 SCRIPTION PRESERVATIVE PAIC L
OTHER (SPECIFIC ION; OVA: HNU: ETC.) CONDUCTIVITY - UMHOS/CM 456) 461/461/462 SAMPLING METHOD AND MATERIAL DISPOSED BOWLE CONTAINER DE SAMPLE CO SAMPLE CO CONTAINER DE	PH 7.28/7.22/7.24/7.79 SCRIPTION PRESERVATIVE PAIC L



PROJECT/NO. South Pout KD/RA	PAGEOF
WELL NO. SPOBIZE REPLICATE NO.	- DATE 16/15/01
	Time COMPLETED 17:50
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Top of PV	/C,
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION 566.78
TOTAL SOUNDED DEPTH OF WELL BELOW MP64.7	WATER-LEVEL ELEVATION \$15.07
DEPTH TO WATER BELOW MP 51.71	DIAMETER OF CASING 2 16
WATER COLUMN IN WELL 12.99	GALLONS EVACUATED PRIOR TO SAMPLING CALCULATED 6:24 Actual &
GALLONS PER FOOT 0.16	Sampling Pump Intake Setting
GALLONS IN WELL 2,08	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Brite	
Color Pal Brown ODOR None APPEARANCE	1117116
COTOR Pal Brown ODOR Whe APPEARANCE OTHER (SPECIELL ION OVA HAVI STC.)	Cloudy TEMPERATURE 14.2 OF 16 14.
Color Pal Brown ODOR Wore APPEARANCE	Cloudy TEMPERATURE 14.2 OF 16 14.
Color Pal Brown ODOR Whe APPEARANCE OTHER (SPECIFIC ION: OVA; HNU: ETC.) CONDUCTIVITY - UNHOS/CM 347 809 705 691 SAMPLING METHOD AND MATERIAL DEPOSATION BALLET CONTAINER DE	Cloudy TEMPERATURE 14.2 °F/C) 14-3 PH 6.55/6/72/6.66/6.46 ESCRIPTION
COTOR Pal Brown ODOR Wore APPEARANCE OTHER (SPECIFIC ION: OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM 347/309/706/69/ SAMPLING METHOD AND MATERIAL DEPOSED BOWN CONTAINER DE CONSTITUENTS SAMPLED. SAMPLE CO	Cloudy TEMPERATURE 14.2 °F/C) 14-3 PH 6.55/6/72/6.66/6.46 ESCRIPTION
COTOR Pal Brown ODOR Wore APPEARANCE OTHER (SPECIFIC ION: OVA; HNU: ETC.) CONDUCTIVITY - UNHOS/CM 347/309/706/69/ SAMPLING METHOD AND MATERIAL DEPOSE DU BALLI CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CONTAINER DE	TEMPERATURE 14.2 OF 16 14.3 PH 6.55/6/72/666/646 ESCRIPTION DINTAINER AFIC H284, T.C.
COTOR Pal Brown ODOR Wore APPEARANCE OTHER (SPECIFIC ION: OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM 347/309/706/69/ SAMPLING METHOD AND MATERIAL DEPOSED BOWN CONTAINER DE CONSTITUENTS SAMPLED. SAMPLE CO	TEMPERATURE 14.2 OF 16 14.3 PH 6.55/6/72/666/646 ESCRIPTION DINTAINER AFIC H284, T.C.
COTOR Pal Brown ODOR Wore APPEARANCE OTHER (SPECIFIC ION: OVA; HNU: ETC.) CONDUCTIVITY - UNHOS/CM 347/309/706/69/ SAMPLING METHOD AND MATERIAL DEPOSE DU BALLI CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CONTAINER DE	TEMPERATURE 14.2 OF 16 14.3 PH 6.55/6/72/666/646 ESCRIPTION DINTAINER AFIC H284, T.C.
COTOR Pal Brown ODOR Wore APPEARANCE OTHER (SPECIFIC ION: OVA; HNU: ETC.) CONDUCTIVITY - UNHOS/CM 347/309/706/69/ SAMPLING METHOD AND MATERIAL DEPOSE DU BALLI CONTAINER DE CONSTITUENTS SAMPLED SAMPLE CONTAINER DE	TEMPERATURE 14.2 OF 16 14.3 PH 6.55/6/72/666/646 ESCRIPTION DINTAINER AFIC H284, T.C.



PROJECT/NO. South Point	RD/RD	PAGE
SITE LOCATION South Point (Thio	
WELL NO. SPOB-34	REPLICATE NO.	DATE 10/5/01
WEATHER 65 Sono	Time BEGAN	Time COMPLETED
7 7		
	EVACUATIO	N DATA
DESCRIPTION OF MEASURING POINT (MP)	Top of PVC	
HEIGHT OF MP ABOVE/BELOW LAND SURFA	•	MP ELEVATIONS65.98
TOTAL SOUNDED DEPTH OF WELL BELOW MP	<u> </u>	WATER-LEVEL ELEVATION 515,89
DEPTH TO WATER BELOW MP	4.6.0	DIAMETER OF CASING 2"
		GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL	32.20	CALCULATED 15.75 Actual 16
GALLONS PER FOOT	0,16	Sampling Pump Intake Setting
GALLONS IN WELL	5.25	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Bailer		
	SAMPLING DATA/FIE	LD PARAMETERS
Color Cray ODOR Non	APPEARANCE_	Cloudy TEMPERATURE 14.9 14.8 OF (60)
Color Gray ODOR NO. OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CN 645 655	APPEARANCE_	Cloudy TEMPERATURE 14.9 14.8 OF (60)
Color Gray ODOR NO. OTHER (SPECIFIC ION: OVA: HNV: ETC. CONDUCTIVITY - UMHOS/CM 695/675 SAMPLING METHOD AND MATERIAL DIS	APPEARANCE	14.7 14.7
OTHER (SPECIFIC ION; OVA; HNV; ETC. CONDUCTIVITY - UNHOS/CM <u>6457675</u>	APPEARANCE	Cloudy TEMPERATURE 14.9 14.8 OF (60)
OTHER (SPECIFIC ION; OVA; HNV; ETC. CONDUCTIVITY - UNHOS/CM <u>6457675</u>	APPEARANCE	14.7 17.7 Cloudy TEMPERATURE 14.9 14.8 of 600 PH 7.10 7.15 7.15 / 7.25
OTHER (SPECIFIC ION; OVA; HNV; ETC. CONDUCTIVITY - UNHOS/CM <u>6457675</u>	APPEARANCE	TEMPERATURE 4,9 14.8 of CO PH 7.10 7.15 7.15 7.25 SCRIPTION NIAINER PRESERVATIVE
OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CM_645/675 SAMPLING METHOD AND MATERIAL	APPEARANCE APPEARANCE APPEARANCE CONTAINER DE SAMPLE CO ZSO MI	14.7 14.7 14.7 14.6 14
OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CM_645/675 SAMPLING METHOD AND MATERIAL	APPEARANCE	TEMPERATURE 4,9 14.8 of CO PH 7.10 7.15 7.15 7.25 SCRIPTION NIAINER PRESERVATIVE
OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CM_645/675 SAMPLING METHOD AND MATERIAL	APPEARANCE APPEARANCE APPEARANCE CONTAINER DE SAMPLE CO ZSO MI	TEMPERATURE 4,9 14.8 of CO PH 7.10 7.15 7.15 7.25 SCRIPTION NIAINER PRESERVATIVE
OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CM_645/675 SAMPLING METHOD AND MATERIAL	APPEARANCE APPEARANCE APPEARANCE CONTAINER DE SAMPLE CO ZSO MI	TEMPERATURE 4,9 14.8 of CO PH 7.10 7.15 7.15 7.25 SCRIPTION NIAINER PRESERVATIVE
OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CM_645/675 SAMPLING METHOD AND MATERIAL	APPEARANCE APPEARANCE APPEARANCE CONTAINER DE SAMPLE CO ZSO MI	TEMPERATURE 4,9 14.8 of CO PH 7.10 7.15 7.15 7.25 SCRIPTION NIAINER PRESERVATIVE
OTHER (SPECIFIC ION: OVA: HNU: ETC. CONDUCTIVITY - UNHOS/CM_645/675 SAMPLING METHOD AND MATERIAL_DIS CONSTITUENTS SAMPLED SELECTED MUNICIPAL REMARKS	APPEARANCE APPEARANCE APPEARANCE CONTAINER DE SAMPLE CO ZSO MI	TEMPERATURE 4,9 14.8 of 60 PH 7.10 7.15 / 7.15 / 7.25 SCRIPTION NTAINER ASSIGN HN03, I.C. HN03, I.C.



PROJECT/NO. South POINT RD/RA	PAGE OF
SITE LOCATION South Con Chro	
WEATHER 65, SUNNY TIME BEGAN 18:18	DATE JUISTO
WEATHER 65 SUNNY Time BEGAN 18:18	Time COMPLETED 18:25
1	
EVACUATIO	ON DATA
DESCRIPTION OF MEASURING POINT (MP) Make on	motor howsing, painted yollas
HEIGHT OF MP ABOVE/BELOW LAND SURFACE	MP ELEVATION
TOTAL SOUNDED DEPTH OF WELL BELOW MP	WATER-LEVEL ELEVATION
DEPTH TO WATER BELOW MP	DIAMETER OF CASING
	GALLONS EVACUATED PRIOR TO SAMPLING
WATER COLUMN IN WELL	CALCULATED Actual
GALLONS PER FOOT	Sampling Pump Intake Setting
GALLONS IN WELL	(FEET BELOW LAND SURFACE)
EVACUATION METHOD Active production well	
Color Now ODOR Now APPEARANCE OTHER (SPECIFIC ION; OVA; HNU; ETC.) CONDUCTIVITY - UNHOS/CM 7/5 SAMPLING METHOD AND MATERIAL Somplay Portion	Char TEMPERATURE 14,8 of 100
CONTAINER DI	ESCRIPTION
	ontainer / Preservative
Ammonic, Nibati 250 m/	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
Siledia Mitals / Notice P	estre UNG, Ice
REMARKS POWDING OF 350 CPM SAMPLING PERSONNEL CAC, GAL	
WELL CASING GAL./FT. 1-½"= 0.06 2" = 0. 1-½"= 0.09 2-½"= 0.	16 3" = 0.37 4" = 0.65



PROJECT/NO. South Point RD/RA SITE LOCATION South Point, Ohic WELL NO. SPYS-24 REPLICATE NO. SPYS- WEATHER CA' Claude Time REGAN 12:15	PAGE
DESCRIPTION OF MEASURING POINT (MP) HEIGHT OF MP ABOVE/BELOW LAND SURFACE TOTAL SOUNDED DEPTH OF WELL BELOW MP DEPTH TO WATER BELOW MP	MP ELEVATION
WATER COLUMN IN WELL	13.6
Color ODOR ODOR APPEARANCE OTHER (SPECIFIC ION: OVA: HNU: ETG.) CONDUCTIVITY - UNHOS/CM 936 SAMPLING METHOD AND MATERIAL Top on Schools per	
CONTAINER DE SAMPLE CO SAM	NTAINER; PLESTIC: PRESERVATIVE 14504, Zec
SAMPLING PERSONNEL WELL CASING GAL./FT. 1-4"= 0.06 2" = 0. 1-4"= 0.09 2-4"= 0.3	16 3" = 0.37 4" = 0.65



L/				- N . C	7 7		
Client Honege							
Project - 0 u /4	POINT	RDR	A City	5041	4 Poin	State OH	
QA samples	5/450	Time star	ted 130	2 2 T	ime Sampled _	13.30 Date 10- 29-02	<u>-</u>
				CULATIONS			
Measuring Point Desc					-		
Total Depth of well be	low mp	-	(ft)	Depth to wate	r below mp	(ft)	
Water Column in well		(ft) Well	Diameter Fac	tor	(gal/ft) [2"	= 0.16 4" = 0.65 6" = 1.47 8" = 2.61	
			EV	ACUATION		otal Volume Evacuated: 3 0 (gal)	
D - 11' . D' .	~	V				ord Other 141117 Pung	
Sampling Method Ba	iler (Disposal	ble) Sul	omersible Pum	p Well	Wizard	Peristaltic PumpOther/ 4 10 (~	واسه
Purged Volume (gal)	Spec Cond (uS)	Temp (C) F)	рН	Turb (NTU)	Other	Comments (color) (odor) (sheen)	
	519	16.6	6,48			Cin	
				5	7		
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	ļ				`		
	 			-(-	7		
Sample				1	1		
<u> </u>			CONTAIN	ER DESCRIPT	<u>ion</u>		
Constituent	s Sampled		San	ple Container		Preservative	
Annonia, N.	Trate	North	0,5	Like	Poly	H 2 S 0 4 H N 0 2	
Total 15,8	er Ca, Cu	1,12, V		1 6, 1	Poly	HNO3	
Comments	2 5	Coph		(106	227	99' - 1991.	
Sampling personnel	AW	, <i>M</i>	5				

Appendix B

Appendix B

Analytical Data Sheets



STL North Canton

4101 Shuffel Drive NW North Canton, OH 44720-6961

Tel: 330 497 9396 Fax: 330 497 0772 www.stl-inc.com

ANALYTICAL REPORT

1/2 (1.12 ted 6-6-01

PROJECT NO. SOUTH POINT RD/RA

Lot #: A1D130171

Mort Schmidt

Cox-Colvin & Associates, Inc.

SEVERN TRENT LABORATORIES, INC.

Kenneth J. Kuzior Project Manager

April 26, 2001

CASE NARRATIVE

A1D130171

The following report contains the analytical results for seventeen water samples submitted to STL North Canton by Cox-Colvin & Associates, Inc. from project number South Point RD/RA. The samples were received April 13, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to Mort Schmidt on April 24, 2001. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

GENERAL CHEMISTRY

Some samples had elevated reporting limits due to matrix interferences or dilution.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

OC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB). a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common
metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank
concentration must be twenty fold less than the concentration reported in the associated environmental
samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	<u>Metals</u>
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

^{*} for analyses run on TJA Trace ICP or GFAA only

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH. ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

STL North Canton, Certifications and Approvals:

ANALYTICAL METHODS SUMMARY

A1D130171

PARAMETI	ER	ANALYTICAL METHOD
Ammonia	Nitrogen	MCAWW 350.2
Inductiv	vely Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate-	-Nitrite	MCAWW 353.2
Trace In	nductively Coupled Plasma (ICP) Metals	SW846 6010B
Reference	ces:	
MCAWW	"Methods for Chemical Analysis of Wate EPA-600/4-79-020, March 1983 and subse	
SW846	"Test Methods for Evaluating Solid Was Methods", Third Edition, November 1986	- · · · · · · · · · · · · · · · · · · ·

SAMPLE SUMMARY

A1D130171

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EATRR	001	SPIS-24	04/11/01	17:30
EATRT	002	SPIS-24A	04/11/01	17:30
EATRV	003	SPMW-01	04/11/01	12:00
EATRW	004	SPMW-02	04/11/01	15:50
EATRX	005	SPMW-03	04/11/01	10:20
EATR0	006	SPMW-04	04/12/01	08:40
EATR1	007	SPMW-05	04/11/01	11:20
EATR2	800	SPMW-07	04/10/01	18:40
EATR4	009	SPMW-07A	04/10/01	18:40
EATR6	010	SPMW-08	04/11/01	15:15
EATR7	011	SPMW-09	04/11/01	09:00
EATR9	012	SPMW-10	04/11/01	14:00
EATTD	013	SPMW-11	04/11/01	17:00
EATTE	014	SPMW-12	04/12/01	10:20
EATTF	015	SPMW-13	04/12/01	09:30
EATTH	016	SPOB-12R	04/12/01	11:10
EATTK	017	SPOB-34	04/12/01	12:00

YTE(S):

- the analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Client Sample ID: SPIS-24

TOTAL Metals

Lot-Sample #...: A1D130171-001 Matrix....: WG

Date Sampled...: 04/11/01 17:30 Date Received..: 04/13/01

RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
: 1107101					
ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EATRR1AD
	Dilution Facto	r: 1			
ND	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EATRR1AF
	Dilution Facto	r: 1			
ND	0.0020	mq/L	SW846 6010B	04/17-04/23/01	EATRR1AE
	Dilution Facto	-		, , ,	
ND	0.025	mg/L	SW846 6010B	04/17-04/23/01	EATRR1AG
•		- '		, ,	
0.37	0.015	mci/Ti	SW846 6010B	04/17-04/23/01	RATRR1AH
V. 3.		-	5	00, 20 00, 00, 00	
NTO	0.010	mct/T.	SW846 6010B	04/17-04/23/01	EATRR1AJ
HD.		•	5010 00105	01/2/ 04/25/01	
	: 1107101 ND ND	RESULT LIMIT : 1107101 ND 0.010 Dilution Facto ND 0.0030 Dilution Facto ND 0.0020 Dilution Facto ND 0.025 Dilution Facto 0.37 0.015 Dilution Facto ND 0.010	### RESULT LIMIT UNITS : 1107101 ND	### RESULT LIMIT UNITS METHOD 107101 ND 0.010 mg/L SW846 6010B Dilution Factor: 1 ND 0.0030 mg/L SW846 6010B Dilution Factor: 1 ND 0.0020 mg/L SW846 6010B Dilution Factor: 1 ND 0.025 mg/L SW846 6010B Dilution Factor: 1 O.37 0.015 mg/L SW846 6010B Dilution Factor: 1 ND 0.010 mg/L SW846 6010B	### RESULT LIMIT UNITS METHOD ANALYSIS DATE 107101 ND 0.010 mg/L SW846 6010B 04/17-04/23/01 Dilution Factor: 1 ND 0.0030 mg/L SW846 6010B 04/17-04/23/01 Dilution Factor: 1 ND 0.0020 mg/L SW846 6010B 04/17-04/23/01 Dilution Factor: 1 ND 0.025 mg/L SW846 6010B 04/17-04/23/01 Dilution Factor: 1 0.37 0.015 mg/L SW846 6010B 04/17-04/23/01 Dilution Factor: 1 ND 0.010 mg/L SW846 6010B 04/17-04/23/01

Client Sample ID: SPIS-24

General Chemistry

Lot-Sample #...: A1D130171-001 Work Order #...: EATRR Matrix....: WG

Date Sampled...: 04/11/01 17:30 Date Received..: 04/13/01

PREPARATION-PREP ANALYSIS DATE BATCH # PARAMETER RESULT UNITS METHOD 04/17/01 Nitrate-Nitrite 7.8 0.5 mg/L MCAWW 353.2 1107303 Dilution Factor: 5

04/21/01 Nitrogen, as Ammonia 25 1.0 mg/L MCAWW 350.2 1111129

Dilution Factor: 1

Client Sample ID: SPIS-24A

TOTAL Metals

Lot-Sample #...: A1D130171-002

Date Sampled...: 04/11/01 17:30 Date Received..: 04/13/01

Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #			45		/ / /	
Arsenic	ND	0.010 Dilution Facto	mg/L er: 1	SW846 6010B	04/17-04/23/01	EATRIIAC
Beryllium	ND	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRT1AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRTIAD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRTIAF
Manganese	0.37	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	BATRT1AG
kel	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRT1AH

Client Sample ID: SPIS-24A

General Chemistry

Lot-Sample #...: A1D130171-002 Work Order #...: EATRT Matrix...... WG

Date Sampled...: 04/11/01 17:30 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	8.5	0.5 ntion Facto	mg/L or: 5	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 Lion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-01

TOTAL Metals

Lot-Sample #...: A1D130171-003 Matrix....: WG

Date Sampled...: 04/11/01 12:00 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND c	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRVIAC
Beryllium	ND	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRV1AE
Cadmium	ND D	0.0020 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRV1AD
Copper	ND D	0.025 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRVIAF
Manganese	0.41	0.015 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRVLAG
Mckel	0.014	0.010 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	KATRVLAH

Client Sample ID: SPMW-01

General Chemistry

Lot-Sample #...: AlD130171-003 Work Order #...: EATRV
Date Sampled...: 04/11/01 12:00 Date Received..: 04/13/01 Matrix....: WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	2.7	0.5 Ition Pacto	mg/L r:5	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 tion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-02

TOTAL Metals

Lot-Sample #...: AlD130171-004 Matrix....: WG

Date Sampled...: 04/11/01 15:50 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATRW1AC
Beryllium	ND	0.0030 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATRWIAE
Cadmium	ND	0.0020 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATRW1AD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRWIAF
Manganese	2.1	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	BATRWLAG
ckel	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRW1AH

Client Sample ID: SPMW-02

General Chemistry

Lot-Sample #...: A1D130171-004 Work Order #...: EATRW Matrix..... WG

Date Sampled...: 04/11/01 15:50 Date Received..: 04/13/01

- -		ution Fact				
Nitrogen, as Ammonia	1.2	1.0	mg/L	MCAWW 350.2	04/21/01	1111129
Nitrate-Nitrite	10 Dil	1.0 ution Fact	mg/L or: 10	MCAWW 353.2	04/17/01	1107386
PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #

Client Sample ID: SPMW-03

TOTAL Metals

Lot-Sample #...: A1D130171-005

Date Sampled...: 04/11/01 10:20 Date Received..: 04/13/01

Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATRX1AC
Beryllium	ND	0.0030 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATRX1AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRX1AD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRX1AF
Manganese	0.19	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATRXLAG
kel	0.010	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	KATRX1AH

Client Sample ID: SPMW-03

General Chemistry

Lot-Sample #...: AlD130171-005 Work Order #...: EATRX Matrix..... WG

Date Sampled...: 04/11/01 10:20 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	4.0	1.0 Ition Facto	mg/L or: 10	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 tion Facto	mg/L or: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-04

TOTAL Metals

Lot-Sample #...: AlD130171-006 Matrix....: WG

Date Sampled...: 04/12/01 08:40 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR01AC
Beryllium	ND I	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR01AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR01AD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR01AF
Manganese	0.063	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	BATRO1AG
kel	ND 1	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR01AH

Client Sample ID: SPMW-04

General Chemistry

Lot-Sample #...: A1D130171-006 Work Order #...: EATR0 Matrix.....: WG

Date Sampled...: 04/12/01 08:40 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	3.5	1.0 tion Facto	mg/L r: 10	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 tion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-05

TOTAL Metals

Lot-Sample #...: AlD130171-007 Matrix....: WG

Date Sampled...: 04/11/01 11:20 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR11AC
Beryllium	ND	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR11AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR11AD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR11AF
Manganese	0.39	0.015 Dilution Factor	mg/L r: 1	SW846 6010B	04/17-04/23/01	BATR11AG
kel	0.014	0.010 Dilution Factor	mg/L r: 1	SW846 6010B	04/17-04/23/01	BATR11AH

Client Sample ID: SPMW-05

General Chemistry

Lot-Sample #...: AlD130171-007 Work Order #...: EATR1 Matrix..... WG

Date Sampled...: 04/11/01 11:20 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	1.2	0.1 ntion Facto	mg/L or: 1	MCAWW 353.2	04/17/01	1107352
Nitrogen, as Ammonia		1.0	mg/L	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-07

TOTAL Metals

Lot-Sample #...: A1D130171-008 Matrix....: WG

Date Sampled...: 04/10/01 18:40 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR21AC
Beryllium	ND	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR21AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR21AD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR21AF
Manganese	0.86	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	KATR21AG
kel	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATR21AH

Client Sample ID: SPMW-07

General Chemistry

Lot-Sample #...: A1D130171-008 Work Order #...: EATR2 Matrix.....: WG

Date Sampled...: 04/10/01 18:40 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	17	2.5 tion Facto	mg/L r: 25	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 tion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-07A

TOTAL Metals

Lot-Sample #...: A1D130171-009

Date Sampled...: 04/10/01 18:40 Date Received..: 04/13/01

Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #			-			
Arsenic	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR41AC
Beryllium	ND	0.0030 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR41AE
Cadmium	ND	0.0020 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR41AD
Copper	ND	0.025 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR41AF
Manganese	0.86	0.015 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR41AG
kel	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATR41AH

Client Sample ID: SPMW-07A

General Chemistry

Lot-Sample #...: A1D130171-009 Work Order #...: EATR4 Matrix..... WG

Date Sampled...: 04/10/01 18:40 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	17	2.5 ution Facto	mg/L or: 25	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0	mg/L or: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-08

TOTAL Metals

Lot-Sample #...: A1D130171-010

Date Sampled...: 04/11/01 15:15 Date Received..: 04/13/01

DPEDARATION - WORK

Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #	
Prep Batch #	: 1107101						
Arsenic	ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EATR61AC	
		Dilution Factor: 1					
Beryllium	ND	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EATR61AE	
-		Dilution Factor: 1					
Cadmium	ND	0.0020	mg/L	SW846 6010B	04/17-04/23/01	EATR61AD	
		Dilution Facto	_				
Copper	ND	0.025	mg/L	SW846 6010B	04/17-04/23/01	EATR61AF	
COPPOL		Dilution Facto	•		,		
Manganese	0.49	0.015	mg/L	SW846 6010B	04/17-04/23/01	RATR61AG	
·aliguiese		Dilution Facto	-	2			
kel	ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EATR61AH	
J. K.	****	Dilution Facto	•		22, 21 22, 23, 32		

Client Sample ID: SPMW-08

General Chemistry

Lot-Sample #...: AlD130171-010 Work Order #...: EATR6 Matrix...... WG

Date Sampled...: 04/11/01 15:15 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	ND Dilu	0.1 stion Facto	mg/L or: 1	MCAWW 353.2	04/17/01	1107352
Nitrogen, as Ammonia		1.0 tion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-09

TOTAL Metals

Lot-Sample #...: A1D130171-011 Matrix....: WG

Date Sampled...: 04/11/01 09:00 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION - ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	0.020	0.010	mg/L	SW846 6010B	04/17-04/23/01	BATR71AC
		Dilution Facto	or: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EATR71AE
-		Dilution Facto	or: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	04/17-04/23/01	EATR71AD
		Dilution Facto	_			
Copper	0.36	0.025	mg/L	SW846 6010B	04/17-04/23/01	BATR71AF
		Dilution Facto	-			
Manganese	14.7	0.015	mq/L	SW846 6010B	04/17-04/23/01	BATR71AG
		Dilution Facto	J .			
kel	0.21	0.010	mg/L	SW846 6010B	04/17-04/23/01	RATR71AH
	···	Dilution Facto	- '		22,21 23,23,02	

Client Sample ID: SPMW-09

General Chemistry

Matrix....: WG

Lot-Sample #...: A1D130171-011 Work Order #...: EATR7
Date Sampled...: 04/11/01 09:00 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	2.9	0.5	mg/L or: 5	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0	mg/L	MCANW 350.2	04/21/01	1111129

Client Sample ID: SPMW-10

TOTAL Metals

Lot-Sample #...: A1D130171-012 Matrix.....: WG

Date Sampled...: 04/11/01 14:00 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION - ANALYSIS DATE	WORK
PARAMETER	RESULT	_ DIMII	UNIIS	METROD	ANALISIS DATE	ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EATR91AC
		Dilution Facto	r: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EATR91AE
		Dilution Facto	r: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	04/17-04/23/01	EATR91AD
	I	Dilution Factor	r: 1			
Copper	ND	0.025	mg/L	SW846 6010B	04/17-04/23/01	EATR91AF
		Dilution Factor	_			
Manganese	1.6	0.015	mg/L	SW846 6010B	04/17-04/23/01	RATR91AG
·····	_	Dilution Factor			,,,,	
kel	0.021	0.010	mg/L	SW846 6010B	04/17-04/23/01	RATR91AH
YEI		Dilution Factor		24040 00102	01, 1. 01, 23, 01	

Client Sample ID: SPMW-10

General Chemistry

Lot-Sample #...: A1D130171-012 Work Order #...: EATR9 Matrix..... WG

Date Sampled...: 04/11/01 14:00 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	2.4 pilu	1.0 tion Facto	mg/L r: 10	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 tion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-11

TOTAL Metals

Lot-Sample #...: A1D130171-013 Matrix....: WG

Date Sampled...: 04/11/01 17:00 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTD1AC
Beryllium	ND	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTD1AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTD1AD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTD1AF
Manganese	0.57	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	RATID1AG
kel	0.034	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	KATID1AH

Client Sample ID: SPMW-11

General Chemistry

Matrix....: WG

Lot-Sample #...: A1D130171-013 Work Order #...: EATTD
Date Sampled...: 04/11/01 17:00 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	6.2	1.0 ution Facto	mg/L or: 10	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0	mg/L	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-12

TOTAL Metals

Lot-Sample #...: A1D130171-014 Matrix....: WG

Date Sampled...: 04/12/01 10:20 Date Received..: 04/13/01

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #			4-			
Arsenic	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATTELAC
Beryllium	ND	0.0030 Dilution Facto	mg/L or: 1	SW846 6010B	04/17-04/23/01	EATTE1AE
Cadmium	ND	0.0020 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTELAD
Copper	ND	0.025 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTE1AF
Manganese	1.0	0.015 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	RATTELAG
kel	0.032	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	BATTE1AH

Client Sample ID: SPMW-12

General Chemistry

Matrix..... WG

Lot-Sample #...: A1D130171-014 Work Order #...: EATTE
Date Sampled...: 04/12/01 10:20 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	3.0	0.5 stion Facto	mg/L or: 5	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0 tion Facto	mg/L or: 1	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPMW-13

TOTAL Metals

Lot-Sample #...: A1D130171-015

Date Sampled...: 04/12/01 09:30 Date Received..: 04/13/01

Matrix..... WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010 Oilution Facto	mg/L er: 1	SW846 6010B	04/17-04/23/01	EATTFIAC
Beryllium	ND E	0.0030 Dilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTFIAE
Cadmium	ND D	0.0020 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTFIAD
Copper	ND	0.025 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTFIAF
Manganese	0.52	0.015 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	RATTFLAG
kel	ND	0.010 ilution Facto	mg/L r: 1	SW846 6010B	04/17-04/23/01	EATTF1AH

Client Sample ID: SPMW-13

General Chemistry

Lot-Sample #...: A1D130171-015 Work Order #...: EATTF Matrix...... WG

Date Sampled...: 04/12/01 09:30 Date Received..: 04/13/01

PARAMETER Nitrate-Nitrite	RESULT	RL .	UNITS mg/L	MCAWW 353.2	ANALYSIS DATE	BATCH #
NICIACE-NICIICE		0.1 tion Facto		MCANN 353.2	04/17/01	1107352
Nitrogen, as Ammonia	ND	1.0	mg/L	MCAWW 350.2	04/21/01	1111129
	Dilu	tion Facto	r: 1			

Client Sample ID: SPOB-12R

TOTAL Metals

Lot-Sample #...: A1D130171-016

Date Sampled...: 04/12/01 11:10 Date Received..: 04/13/01

Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1107101					
Arsenic	ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EATTH1AC
		Dilution Facto	r: 1			
Beryllium	ND '	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EATTH1AE
-		Dilution Facto	r: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	04/17-04/23/01	EATTHIAD
Cadmidin		Dilution Facto	_		02, 2. 02, 22, 02	
Connex	ND	0.025	mg/L	SW846 6010B	04/17-04/23/01	FATTH1AF
Copper	ND	Dilution Facto	•	50040 0010B	04/1/ 04/23/01	
			_			
Manganese	0.29	0.015	mg/L	SW846 6010B	04/17-04/23/01	RATIHLAG
		Dilution Facto	r: 1			
kel	0.013	0.010	mg/L	SW846 6010B	04/17-04/23/01	RATTH1AH
		Dilution Facto	r: 1			

Client Sample ID: SPOB-12R

General Chemistry

Matrix....: WG

Lot-Sample #...: A1D130171-016 Work Order #...: EATTH
Date Sampled...: 04/12/01 11:10 Date Received..: 04/13/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	5.8	0.5 ition Pacto	mg/L r: 5	MCAWW 353.2	04/17/01	1107386
Nitrogen, as Ammonia		1.0	mg/L	MCAWW 350.2	04/21/01	1111129

Client Sample ID: SPOB-34

TOTAL Metals

Lot-Sample #...: A1D130171-017

Date Sampled...: 04/12/01 12:00 Date Received..: 04/13/01

Matrix....: WG

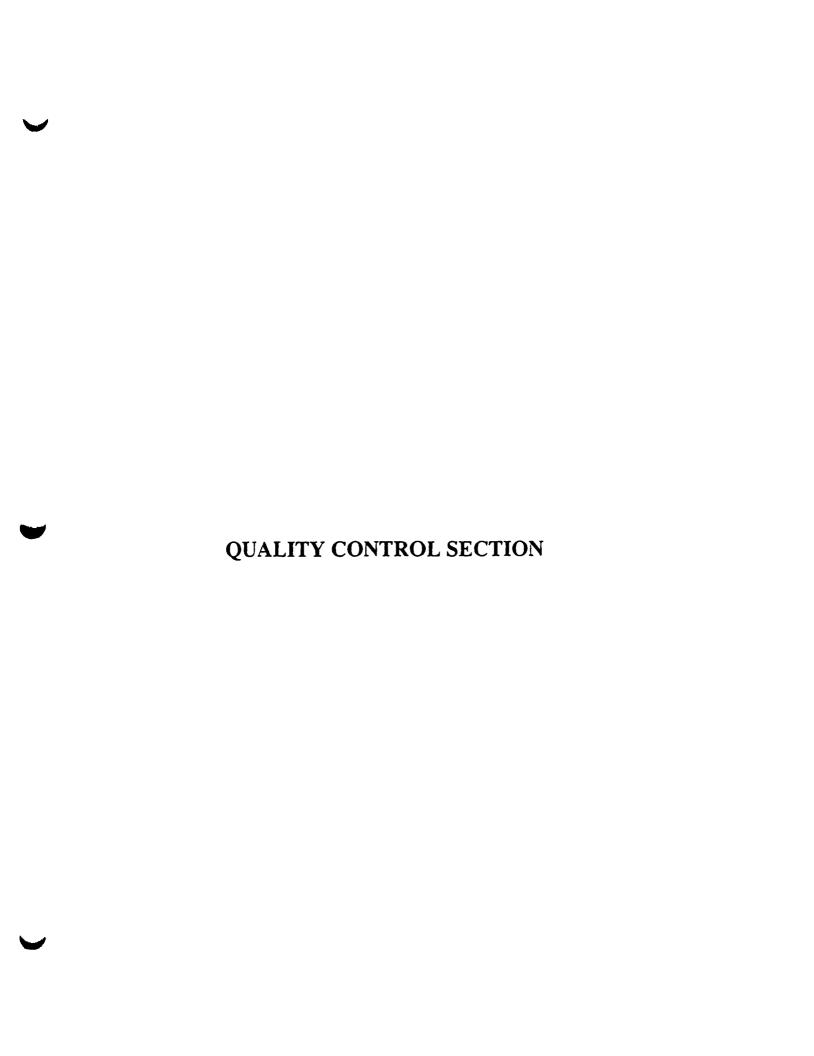
PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Arsenic	.: 1107101 0.017	0.010	mg/L	SW846 6010B	04/17-04/23/01	BATTKLAC
		Dilution Fact	or: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EATTK1AE
		Dilution Fact	or: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	04/17-04/23/01	EATTK1AD
		Dilution Pact	or: 1			
Copper	ND	0.025	mg/L	SW846 6010B	04/17-04/23/01	EATTK1AF
		Dilution Fact	or: 1			
Manganese	0.40	0.015	mg/L	SW846 6010B	04/17-04/23/01	RATTKLAG
		Dilution Fact	or: 1			
kel	0.011	0.010	mg/L	SW846 6010B	04/17-04/23/01	RATIKLAH
		Dilution Fact	or: 1			

Client Sample ID: SPOB-34

General Chemistry

Lot-Sample #...: A1D130171-017 Work Order #...: EATTK Matrix..... WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	ND Dilu	0.1 tion Facto	mg/L r: 1	MCAWW 353.2	04/17/01	1107352
Nitrogen, as Ammonia		1.0 tion Facto	mg/L r: 1	MCAWW 350.2	04/21/01	1111129



METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A1D130171 Matrix....: WATER

		REPORTIN	G		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
MB Lot-Sample	#: A1D17000	0-101 Prep B	atch #:	1107101		
Arsenic	ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EAWJ81AA
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	04/17-04/23/01	EAWJ81AD
-		Dilution Fact	tor: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	04/17-04/23/01	EAWJ81AC
		Dilution Fact	tor: 1			
Copper	ND	0.025	mg/L	SW846 6010B	04/17-04/23/01	EAWJ81AE
		Dilution Fact	-			
Manganese	ND	0.015	mg/L	SW846 6010B	04/17-04/23/01	EAWJ81AF
3		Dilution Fact				
Nickel	ND	0.010	mg/L	SW846 6010B	04/17-04/23/01	EAWJ81AG
		Dilution Fact	•			
NOTE (S) :						

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A1D130171

Matrix....: WATER

		REPORTING	3		PREPARATION-	PREP
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	BATCH #
Nitrate-Nitrite		Work Order	#: EAW861AA	MB Lot-Sample #:	A1D170000-303	
	ND	0.1	mg/L	MCAWW 353.2	04/17/01	1107303
		Dilution Fact	or: 1			
Nitrate-Nitrite		Work Order	#: EAX2Q1AA	MB Lot-Sample #:	A1D170000-352	
	ND	0.1	mg/L	MCAWW 353.2	04/17/01	1107352
		Dilution Facto	or: 1			
Nitrate-Nitrite		Work Order	#: EAXLJ1AA	MB Lot-Sample #:	A1D170000-386	
	ND	0.1	mg/L	MCAWW 353.2	04/17/01	1107386
		Dilution Facto	or: 1			
Nitrogen, as Ammon	nia	Work Order	#: EA7CE1AA	MB Lot-Sample #:	A1D210000-129	
	ND	1.0	mg/L	MCAWW 350.2	04/21/01	1111129
		Dilution Facto	or: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	A1D130171			Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Arsenic	A1D170000-:		tch #: 1107101 SW846 6010B	04/17-04/23/01	EAWJ81AH
		Dilution Facto	or: 1		
Cadmium	103	(80 - 120) Dilution Facto	SW846 6010B	04/17-04/23/01	EAWJ81AJ
Beryllium	100	(80 - 120) Dilution Facto	SW846 6010B	04/17-04/23/01	EAWJ81AK
Copper	100	(80 - 120) Dilution Facto	SW846 6010B r: 1	04/17-04/23/01	EAWJ81AL
Manganese	101	(80 - 120) Dilution Facto	SW846 6010B r: 1	04/17-04/23/01	EAWJ81AM
kel	100	(80 - 120) Dilution Factor	SW846 6010B r: 1	04/17-04/23/01	EAWJ81AN

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #: A1D130171

PARAMETER Nitrate-Nitrite	PERCENT RECOVERY	RECOVERY LIMITS Work Order	METHOD #: EAW861AC I	ANALY	RATION- SIS DATE #: AlD170000	
	93	(85 - 115) Dilution Facto	MCAWW 353.2 or: 1	04	/17/01	1107303
Nitrate-Nitrite	94		#: EAX2Q1AC I MCAWW 353.2 or: 1	-	#: A1D170000 /17/01	-352 1107352
Nitrate-Nitrite		Work Order	#: EAXLJ1AC I	CS Lot-Sample	: A1D170000	-386
	96	(85 - 115) Dilution Facto	MCAWW 353.2 or: 1	04	/17/01	1107386
Nitrogen, as Amu	monia 88		#: EA7CE1AC L MCAWW 350.2 pr: 1	_	: A1D210000 /21/01	-129 1111129

MOTE(S):

ulations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot Date Sample	• • • • • • • • • • • • • • • • • • • •	: 04/13/01	Matrix	: WG		
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS RPD	RPD LIMITS	METHOD	PREPARATION - ANALYSIS DATE	WORK ORDER #
MS Lot-Samp	le #: AlD13	30171-012 Prep I	Batch #	: 1107101		
Arsenic	105	(75 - 125)		SW846 6010B	04/17-04/23/01	EATR91AM
	103	(75 - 125) 1.8	(0-20)	SW846 6010B	04/17-04/23/01	
		Dilution Fac	tor: 1			
Beryllium	107	(75 - 125)		SW846 6010B	04/17-04/23/01	EATR91AR
-	105	(75 - 125) 1.8	(0-20)	SW846 6010B	04/17-04/23/01	
		Dilution Fac	tor: 1		., = ., .,,	
Cadmium	107	(75 - 125)		SW846 6010B	04/17-04/23/01	EATR91AP
	105	(75 - 125) 1.9	(0-20)	SW846 6010B	04/17-04/23/01	
		Dilution Fac	tor: 1			•
Copper	105	(75 - 125)		SW846 6010B	04/17-04/23/01	EATR91AU
	104	(75 - 125) 1.0	(0-20)	SW846 6010B	04/17-04/23/01	
		Dilution Fac	tor: 1			
nganese	110	(75 - 125)		SW846 6010B	04/17-04/23/01	EATR91AW
	104	(75 - 125) 1.3	(0-20)	SW846 6010B	04/17-04/23/01	EATR91AX
		Dilution Fac				
Nickel	105	(75 - 125)		SW846 6010B	04/17-04/23/01	EATR91A0
	103	(75 - 125) 1.6	(0-20)	SW846 6010B	04/17-04/23/01	EATR91A1
		Dilution Fac				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A1D130171 Matrix.....: WG

Date Sampled...: 04/11/01 14:00 Date Received..: 04/13/01

	PERCENT	RECOV	ERY	RPD		PREPARATION	- PREP
PARAMETER	RECOVERY	LIMIT	S	RPD LIMIT	S METHOD	ANALYSIS DA	TE BATCH #
Nitrate-Nitr	ite		WO#:	EATRRIAL-M	S/EATRRIAM-MSD	MS Lot-Sample #:	A1D130171-001
	75	(85 -	115)		MCAWW 353.2	04/17/01	1107303
	84	(85 -	115)	2.3 (0-20) MCAWW 353.2	04/17/01	1107303
			Dilut	ion Factor: 1			
Nitrate-Nitr	ite		WO# :	EATR91A2-M	S/EATR91A3-MSD	MS Lot-Sample #:	A1D130171-012
	84 N	(85 -	115)		MCAWW 353.2	04/17/01	1107386
	86	(85 -	115)	1.4 (0-20) MCAWW 353.2	04/17/01	1107386
			Dilut	ion Factor: 1			
Nitrogen, as	Ammonia		WO#:	EATR91AK-M	S/EATR91AL-MSD	MS Lot-Sample #:	A1D130171-012
	88	(80 -	120)		MCAWW 350.2	04/21/01	1111129
	125 N,*	(80 -	120)	32 (0-20)) MCAWW 350.2	04/21/01	1111129
			Diluti	ion Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

^{*} Spiked analyte recovery is outside stated control limits.

Elative percent difference (RPD) is outside stated control limits.

1151 Bethel Road Suite 101 Columbus, Ohio 43220 Phone (614) 442-1970 Fax (614) 442-1971

Chain-of-Custody Record

Analytical Laboratory: Severn Trent

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Project:

Project Number: South Point RD/RA

Sample ID	Date	Time	Media	Container Type	Preservative	Requested Analysis	Cooler II
SPIS-24	4/11/2001	17:30	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPIS-24	4/11/2001	17:30	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPIS-24A	4/11/2001	17:30	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPIS-24A	4/11/2001	17:30	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPMW-01	4/11/2001	12:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-01	4/11/2001	12:00	Ground Water	1 Liter Piastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-02	4/11/2001	15:50	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-02	4/11/2001	15:50	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-03	4/11/2001	10:20	Ground Water	1 Liter Piastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-03	4/11/2001	10:20	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-04	4/12/2001	08:40	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPMW-04	4/12/2001	08:40	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPMW-05	4/11/2001	11:20	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-05	4/11/2001	11:20	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-07	4/10/2001	18:40	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-07	4/10/2001	18:40	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-07A	4/10/2001	18:40	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-07A	4/10/2001	18.40	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-08	4/11/2001	15:15	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-08	4/11/2001	15:15	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-09	4/11/2001	09:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-09	4/11/2001	09:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326

1151 Bethel Road Suite 101 Columbus, Ohio 43220 Phone (614) 442-1970 Fax (614) 442-1971

Chain-of-Custody Record

Analytical Laboratory: Severn Trent

Page 2 of 3

Project:

Project Number: South Point RD/RA

Sampler(s): KWV MAS

Sample ID	Date	Time	Media	Container Type	Preservative	Requested Analysis	Cooler II
SPMW-10	4/11/2001	14:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-10	4/11/2001	14:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-10MS	4/11/2001	14:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-10MS	4/11/2001	14:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-10MSD	4/11/2001	14.00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-10MSD	4/11/2001	14:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-11	4/11/2001	17:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-11	4/11/2001	17:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-12	4/12/2001	10:20	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPMW-12	4/12/2001	10:20	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPMW-13	4/12/2001	09:30	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPMW-13	4/12/2001	09:30	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPOB-12R	4/12/2001	11:10	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPOB-12R	4/12/2001	11:10	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPOB-34	4/12/2001	12:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPOB-34	4/12/2001	12:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
Temp	4/10/2001	08:00	Aqueous	1 Oz. Poly	Ice	Temperature	J326
Temp	4/10/2001	08:00	Aqueous	1 Oz. Poly	Ice	Temperature	K57

5- 4-13-01 0720

1151 Bethel Road Suite 101 Columbus, Ohio 43220 Phone (614) 442-1970 Fax (614) 442-1971

Chain-of-Custody Record

Analytical Laboratory: Severn Trent

Page 3 of 3

Project:

Project Number: South Point RD/RA

Sample ID Date			Container Type	Preservative	Requ	ested Analysis	Cooler ID
Relinquished By:	Date: 18 Mys	Time: (8:0	O Received By-	900)	Date: 4-13-01	Time: 0921)
Retinquished By:	Date:	Time:	Received By:		[Date:	Time:
Relinquished By:	Date:	Time:	Received By:			Date:	Time:
Comments: See attached PQL table for re	porting limits. FedEx	Air bill numbers	are 791527290898	3 and 79092554337	7.		
Deliverables: Data Package: Standard		Turnaround Time:	Normal	Disk	Deliverables? Y	'es Numbe	r of Copies: 1
Send Data to: Mort Schmidt	Shipping Info: Carrier:	FedEx	Waybill: See Con	nments Custody	Seal: 'Z pc.	Cooler Pre	serv. Water Ice
1							

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Chain-of-Custody Record

Analytical Laboratory: Severn Trent

Page 1 of 3

Project:

Project Number: South Point RD/RA

Sample ID	Date	Time	Media	Container Type	Preservative	Requested Analysis	Cooler II
SPIS-24	4/11/2001	17:30	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPIS-24	4/11/2001	17:30	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPIS-24A	4/11/2001	17:30	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPIS-24A	4/11/2001	17:30	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPMW-01	4/11/2001	12:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-01	4/11/2001	12:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As. Be, Cd, Cu, Mn, and Ni)	J326
SPMW-02	4/11/2001	15:50	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-02	4/11/2001	15:50	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-03	4/11/2001	10:20	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-03	. 4/11/2001	10:20	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-04	4/12/2001	08:40	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPMW-04	4/12/2001	08:40	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPMW-05	4/11/2001	11:20	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-05	4/11/2001	11:20	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-07	4/10/2001	18:40	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-07	4/10/2001	18:40	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-07A	4/10/2001	18:40	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-07A	4/10/2001	18:40	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-08	4/11/2001	15:15	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-08	4/11/2001	15:15	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-09	4/11/2001	09:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-09	4/11/2001	09:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326

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Chain-of-Custody Record

Analytical Laboratory: Severn Trent

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Project:

Project Number: South Point RD/RA

Sample ID	Date	Time	Media	Container Type	Preservative	Requested Analysis	Cooler IE
SPMW-10	4/11/2001	14:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-10	4/11/2001	14:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-10MS	4/11/2001	14:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-10MS	4/11/2001	14:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-10MSD	4/11/2001	14:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-10MSD	4/11/2001	14:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-11	4/11/2001	17:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	J326
SPMW-11	4/11/2001	17:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J326
SPMW-12	4/12/2001	10:20	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPMW-12	4/12/2001	10:20	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPMW-13	4/12/2001	09:30	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPMW-13	4/12/2001	09:30	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPOB-12R	4/12/2001	11:10	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPOB-12R	4/12/2001	11:10	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
SPOB-34	4/12/2001	12:00	Ground Water	1 Liter Plastic	H2SO4	Ammonia and Nitrate/Nitrite	K57
SPOB-34	4/12/2001	12:00	Ground Water	1 Liter Plastic	HNO3	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	K57
Temp	4/10/2001	08:00	Aqueous	1 Oz. Poly	Ice	Temperature	J326
Temp	4/10/2001	08:00	Aqueous	1 Oz. Poly	Ice	Temperature	K57

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Chain-of-Custody Record

Analytical Laboratory: Severn Trent

Page 3 of 3

Project:

Project Number: South Point RD/RA

Sample ID Date			Container Type	Preservative	Req	uested Analysis	Cooler ID
Relinquished By:	- Date: Tous	Time: 18:0	O Received By:			Date:	Time.
Relinquished By:	Date:	Time:	Received By:			Date:	Time:
Relinquished By.	Date:	Time:	Received By:			Date.	Time
Comments: See attached PQL table for rep	oorting limits. FedEx	k Air bill numbers	are 791527290898	3 and 79092554337	7.		
Deliverables Data Package: Standard		Turnaround Time:	Normal	Disk	Deliverables?	Yes Numbe	r of Copies: 1
Send Data to: Mort Schmidt	Shipping Info: Carrier:	FedEx	Waybill: See Con	nments Custody	/ Seal: '2 /c.	Corle - Cooler Pre	eserv. Water Ice

STL North Canton 4101 Shuffel Drive NW North Canton, OH 44720-6961

Tel: 330 497 9396 Fax: 330 497 0772 www.stl-nc.com

ANALYTICAL REPORT

SOUTH POINT RD/RA

Lot #: AlJ180104

validated LJ & 11/29/01 Ext in DB 1-11-02

Mort Schmidt

Cox-Colvin & Associates, Inc.

SEVERN TRENT LABORATORIES, INC.

Kenneth J. Kuzior Project Manager

October 30, 2001



October 7, 2001

STL North Canton 4101 Shuffel Drive NW North Canton, OH 44720 Pb. 230, 107, 2306

Ph: 330-497-9396 Fx: 330-497-0772

A note to our clients:

Effective October 7, 2001, STL North Canton has changed the way inorganic blank contamination is being flagged on our final reports.

Historically, an inorganic (metals & general chemistry) result has been flagged with a special code when contamination at a level above the reporting limit was found in the associated method blank. The criteria used by the laboratory to determine the acceptability of the result has been included as a footnote on the same page. Blank contamination between the method detection limit (MDL) and the reporting limit (RL) was never flagged on the sample result pages.

As of October 7, 2001, metals and general chemistry results will be flagged with a "J" any time the laboratory has reported a concentration of an element/analyte in your sample and has also found a reportable concentration of the same element/analyte in the associated method blank. The changes will affect your final report as follows:

> If you have not requested that element/analyte concentrations between the MDL and the RL (estimated values) be reported:

When the laboratory is reporting only concentrations above the reporting limit, an inorganic result will be flagged with a "J" if there is a reported concentration in the sample and the element/analyte was also found in the associated method blank at a concentration greater than the reporting limit.

> If you have requested that element/analyte concentrations between the MDL and the RL (estimated values) be reported:

If estimated values of metals/analytes are reported, an inorganic result between the method detection limit and the reporting limit will to be flagged with a "B" to indicate that the concentration is estimated. Going forward, the result will also be flagged with a "J" if the element/analyte was also found in the associated method blank at a concentration above the applicable method detection limit.

In either case, when method blank contamination is present, the laboratory evaluates the level of contamination against a set of acceptance criteria to determine whether the associated sample results will be accepted, or rework performed. The acceptance criteria are defined in a two-page narrative describing "Quality Control Elements" that is included in your final report immediately after the Case Narrative.

The end result of these changes is that you may find more "blank contamination" flags in your inorganic results than you have been accustomed to seeing in the past. Please know that nothing has changed in the laboratory's processes. The change is simply intended to give our clients information that is easier to read and interpret.

If you have any questions related to this change, please don't hesitate to call your project manager for more information.

CASE NARRATIVE

A1J180104

The following report contains the analytical results for eighteen water samples submitted to STL North Canton by Cox-Colvin & Associates, Inc. from the South Point RD/RA Site. The samples were received October 17, 2001, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to Mort Schmidt on October 29, 2001.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

OC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals
contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration
must be twenty fold less than the concentration reported in the associated environmental samples. (See common
laboratory contaminants listed below.)

Volatile (GC or GC/MS)	<u>Semivolatile (GC/MS)</u>	<u>Metals</u>
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- for analyses run on TJA Trace ICP, ICPMS or GFAA only
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

 Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.



STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-0H048),
Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001),
New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024),
Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003),
Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY,
USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

ANALYTICAL METHODS SUMMARY

A1J180104

PARAMET	ER	ANALYTICAL METHOD
Ammonia	Nitrogen	MCAWW 350.2
Inducti	vely Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate	-Nitrite	MCAWW 353.2
Trace I	nductively Coupled Plasma (ICP) Metals	SW846 6010B
Referen	ces:	
MCAWW	"Methods for Chemical Analysis of Wate EPA-600/4-79-020, March 1983 and subse	
SW846	"Test Methods for Evaluating Solid Was Methods", Third Edition, November 1986	

SAMPLE SUMMARY

A1J180104

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EMA9F	001	SPIS-23	10/15/01	18:25
EMA9G	002	SPIS-24	10/16/01	
EMA9H	003	SPIS-24A	10/16/01	
EMA9J	004	SPMW-01	10/16/01	
EMA9K	005	SPMW-02	10/16/01	
EMA9L	006	SPMW-03	10/16/01	
EMA9M	007	SPMW-04	10/15/01	
EMA9N	008	SPMW-05	10/15/01	
EMA9P	009	SPMW-07	10/16/01	
EMA9Q	010	SPMW-07A	10/16/01	
EMA9T	011	SPMW-08	10/16/01	
EMA9V	012	SPMW-09	10/15/01	
EMA9W	013	SPMW-10	10/16/01	
EMA9X	014	SPMW-11	10/15/01	
EMA90	015	SPMW-12	10/15/01	16:40
EMA91	016	SPMW-13	10/15/01	
EMA92	017	SPOB-12R	10/15/01	
EMA93	018	SPOB-34	10/15/01	

TE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, sollds, solubility, temperature, viscosity, and weight.

Client Sample ID: SPIS-23

TOTAL Metals

Lot-Sample #...: A1J180104-001 Matrix.....: WG

RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- WORK ANALYSIS DATE ORDER #
: 1292308				
ND	0.010	mg/L	SW846 6010B	10/22-10/25/01 EMA9F1AC
	Dilution Facto	r: 1		
ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01 EMA9F1AE
	Dilution Facto	r: 1		
ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01 EMA9F1AD
ND	0.025	mcr/L	SW846 6010B	10/22-10/25/01 EMA9F1AF
			2	, ,
0.24	0.015	mq/L	SW846 6010B	10/22-10/25/01 EMA9F1AG
תוא	0.010	ma/L	SW846 6010B	10/22-10/25/01 EMA9F1AH
		•		
	: 1292308 ND ND	### RESULT LIMIT : 1292308 ND	### RESULT LIMIT UNITS : 1292308 ND	### RESULT LIMIT UNITS METHOD 1292308 ND 0.010 mg/L SW846 6010B Dilution Factor: 1 ND 0.0030 mg/L SW846 6010B Dilution Factor: 1 ND 0.0020 mg/L SW846 6010B Dilution Factor: 1 ND 0.025 mg/L SW846 6010B Dilution Factor: 1 O.24 0.015 mg/L SW846 6010B Dilution Factor: 1 ND 0.010 mg/L SW846 6010B

Client Sample ID: SPIS-23

General Chemistry

Lot-Sample #...: A1J180104-001 Work Order #...: EMA9F Matrix..... WG

Date Sampled...: 10/15/01 18:25 Date Received..: 10/17/01

PREPARATION-PREP PARAMETER RESULT UNITS ANALYSIS DATE BATCH # RL METHOD Nitrate-Nitrite 1.0 1297510 mg/L MCAWW 353.2 10/24/01 Dilution Factor: 10 Nitrogen, as Ammonia ND 1.0 mg/L MCAWW 350.2 10/20/01 1293094

Dilution Factor: 1

Client Sample ID: SPIS-24

TOTAL Metals

Lot-Sample #...: AlJ180104-002 Matrix....: WG

		REPORTIN	G		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #.	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9G1AC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9G1AE
		Dilution Fac	- '			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9G1AD
		Dilution Fac	tor: 1			
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9G1AF
00220		Dilution Fac	•			
Manganese	0.32	0.015	mg/L	SW846 6010B	10/22-10/25/01	EMA9G1AG
J	*	Dilution Fac				
ckel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9G1AH
		Dilution Fac	•			

Client Sample ID: SPIS-24

General Chemistry

Lot-Sample #...: AlJ180104-002 Work Order #...: EMA9G Matrix...... WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	11 Dil	1.0 ution Facto	mg/L or: 10	MCAWW 353.2	10/24/01	1297510
Nitrogen, as Ammonia		1.0	mg/L	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPIS-24A

TOTAL Metals

Lot-Sample #...: AlJ180104-003 Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION - ANALYSIS DATE	WORK ORDER #
Prep Batch #.						
Arsenic	ND	0.010 Dilution Facto	mg/L or: 1	SW846 6010B	10/22-10/25/01	EMA9H1AC
Beryllium	ND	0.0030 Dilution Facto	mg/L or: 1	SW846 6010B	10/22-10/25/01	EMA9H1AE
Cadmium	ND	0.0020 Dilution Pacto	mg/L or: 1	SW846 6010B	10/22-10/25/01	EMA9H1AD
Copper	ND	0.025 Dilution Facto	mg/L or: 1	SW846 6010B	10/22-10/25/01	EMA9H1AF
Manganese	0.30	0.015 Dilution Facto	mg/L or: 1	SW846 6010B	10/22-10/25/01	KMA9HLAG
ckel	ND	0.010 Dilution Facto	mg/L r: 1	SW846 6010B	10/22-10/25/01	ЕМА 9Н1АН

Client Sample ID: SPIS-24A

General Chemistry

Lot-Sample #...: AlJ180104-003 Work Order #...: EMA9H Matrix..... WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	11 Dile	1.0 tion Facto	mg/L or: 10	MCAWW 353.2	10/24/01	1297510
Nitrogen, as Ammonia		1.0 Ition Facto	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-01

TOTAL Metals

Lot-Sample #...: A1J180104-004

Date Sampled...: 10/16/01 13:15 Date Received..: 10/17/01

Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9J1AC
		Dilution Facto	or: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9J1AE
•		Dilution Pacto				
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9J1AD
		Dilution Facto				
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9J1AF
COPPEL	ND	Dilution Facto	_	2	20,22 20,00,00	
Manganese	0.24	0.015	mg/L	SW846 6010B	10/22-10/25/01	RMA 9.J1.AG
мануаневе	0.24	Dilution Facto		511040 00205	20,22 20,20,02	
man add in the st		0.010	/ 7	SW846 6010B	10/22-10/25/01	PMA Q.T1 AH
ickel	ND	0.010	mg/L	SM040 DUIVD	10/22-10/23/01	Brus Ju Lau
		Dilution Facto	L: T			

Client Sample ID: SPMW-01

General Chemistry

Lot-Sample #...: A1J180104-004 Work Order #...: EMA9J Matrix..... WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	3.6	1.0 ution Facto	mg/L or: 10	MCAWW 353.2	10/24/01	1297510
Nitrogen, as Ammonia		1.0 ntion Facto	mg/L r: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-02

TOTAL Metals

Matrix..... wG

Lot-Sample #...: AlJ180104-005

Date Sampled...: 10/16/01 10:15 Date Received..: 10/17/01

		REPORTIN	I G		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #	: 1292308					
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9K1AI
		Dilution Fac	tor: 1			
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9K1AF
		Dilution Fac	tor: 1			
Manganese	1.0	0.015	wg/L	SW846 6010B	10/22-10/25/01	EMA9KLAC
_		Dilution Fac	tor: 1			
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9KLAC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9K1AE
	3.2	Dilution Fac	•			
ckel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9K1AF
- CACL	***	Dilution Fac	_			

Client Sample ID: SPMW-03

TOTAL Metals

Lot-Sample #...: A1J180104-006 Matrix....: WG

PARAMETER	RESULT	REPORTIN LIMIT	IG UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
						
Prep Batch #			4-	C CO. O.	10/00 10/05/05	
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/02	L EMA9LIAC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/02	EMA9L1AE
		Dilution Fac	<u> </u>			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9L1AD
Cault all		Dilution Fac	-			
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9L1AF
Copper	ND	Dilution Fac	-		20,22 20,22,	
Vanganasa	2.6	0.015	mg/L	SW846 6010B	10/22-10/25/01	BMA9L1AG
Manganese	2.0	Dilution Fac	•	5.1010 0020	20,22 20,20,00	
_			4-	G1046 6016D	10/22 10/25/22	DWAGE 120
ckel	0.039	0.010	mg/L	SW846 6010B	10/22-10/25/01	LAMASLIAH
		Dilution Fac	tor: l			

Client Sample ID: SPMW-03

General Chemistry

Lot-Sample #...: A1J180104-006 Work Order #...: EMA9L Date Sampled...: 10/16/01 10:45 Date Received..: 10/17/01 Matrix....: WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	0.2	0.1 ition Facto	mg/L or: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-04

TOTAL Metals

Lot-Sample #...: A1J180104-007 Matrix.....: WG

-						
		REPORTIN	īG		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	L EMA9M1AC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9M1AE
2007220		Dilution Fac	-			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9M1AD
County and		Dilution Pac			20,00 20,00	
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9M1AF
copper	ND	Dilution Fac		0.010 00102	20, 50 20, 10, 01	
Manganese	0.065	0.015	mg/L	SW846 6010B	10/22-10/25/01	I KMA9MIAG
мандамеве	0.003	Dilution Fac			20,22 20,25,05	
			/ •	CHOAC COLOR	10/22-10/25/01	EMA OM1 NU
ckel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	. ENGLYMIAN
		Dilution Fac	tor: 1			

Client Sample ID: SPMW-04

General Chemistry

Lot-Sample #...: A1J180104-007 Work Order #...: EMA9M Matrix...... wG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Witrite	2.9	1.0	mg/L or: 10	MCAWW 353.2	10/24/01	1297510
Nitrogen, as Ammonia		1.0 ution Facto	wg/L r: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-05

TOTAL Metals

Lot-Sample #...: A1J180104-008 Matrix....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9N1AC
		Dilution Facto	r: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9N1AE
-		Dilution Facto	r: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9N1AD
		Dilution Facto	•		, , ,	
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9N1AF
COPPCI		Dilution Facto	-	2010	20,22 20,20,00	
Manganese	0.46	0.015	mg/L	SW846 6010B	10/22-10/25/01	RMA9N1AG
manganese	0.40	Dilution Facto	_		20,22 20,00,02	
Maria de la ca	•	2 22 2	/5	SW846 6010B	10/22-10/25/01	EMA ONT AU
ckel	ND	0.010	mg/L	2M0#0 00100	10/22-10/23/01	BURSHIAN
		Dilution Facto	r: 1			

Client Sample ID: SPMW-05

General Chemistry

Lot-Sample #...: AlJ180104-008 Work Order #...: EMA9N Matrix..... WG

Date Sampled...: 10/15/01 19:45 Date Received..: 10/17/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Witrite	0.9	0.1 ution Facto	mg/L or: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-07

TOTAL Metals

Lot-Sample #...: A1J180104-009 Matrix.....: WG

Date Sampled...: 10/16/01 12:45 Date Received..: 10/17/01

		REPORTIN	G		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #.	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9P1AC
		Dilution Fact	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9P1AE
•		Dilution Fact	- ·			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9P1AD
		Dilution Fact			, , ,	
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9P1AF
		Dilution Fact	<u>-</u> :		. , ,	
Manganese	0.29	0.015	mg/L	SW846 6010B	10/22-10/25/01	EMA9PLAG
····	0.12	Dilution Fact	_			
ckel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9PLAH
CACI	212	Dilution Fact	_	J	,,	

Client Sample ID: SPMW-07

General Chemistry

Lot-Sample #...: AlJ180104-009 Work Order #...: EMA9P Matrix..... WG

Date Sampled...: 10/16/01 12:45 Date Received..: 10/17/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	0.4	0.1 ution Facto	mg/L or: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0 ution Facto	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-07A

TOTAL Metals

Lot-Sample #...: AlJ180104-010 Matrix..... wg

Date Sampled...: 10/16/01 12:45 Date Received..: 10/17/01

PARAMETER	RESULT	REPORTIN LIMIT	G UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	.: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9Q1AC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9Q1AE
-			_			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA901AD
		Dilution Pac	_			
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA901AF
	<u>_</u>	Dilution Fact	-	- 12 - 2 - 1 - 1 - 1 - 1	,	
Manganese	0.32	0.015	mg/L	SW846 6010B	10/22-10/25/01	RMA901AG
3		Dilution Fact	•			
ickel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA901AH
		Dilution Fact	_			

Client Sample ID: SPMW-07A

General Chemistry

Lot-Sample #...: A1J180104-010 Work Order #...: EMA9Q
Date Sampled...: 10/16/01 12:45 Date Received..: 10/17/01 Matrix..... WG

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	0.4	0.1 ution Facto	mg/L r: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0 stion Facto	mg/L r: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-08

TOTAL Metals

Lot-Sample #...: A1J180104-011 Matrix.....: WG

Date Sampled...: 10/16/01 09:40 Date Received..: 10/17/01

		REPORTING	3		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #	.: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9T1AC
		Dilution Fact	or: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9T1AE
		Dilution Fact				
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9T1AD
CadiiiIdiii	N2	Dilution Fact	_	50040 00402	10/12 10/25/01	
		2 225	17	OMO 4.C. CO 1.O.D.	10/22 10/25/21	PH/3 APR 3 P
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	BMA9TIAF
		Dilution Fact	or: 1			
Manganese	0.18	0.015	mg/L	SW846 6010B	10/22-10/25/01	EMA9TLAG
		Dilution Fact	or: 1			
ckel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9T1AH
		Dilution Fact	•			

Client Sample ID: SPMW-08

General Chemistry

Matrix....: WG

Lot-Sample #...: AlJ180104-011 Work Order #...: EMA9T
Date Sampled...: 10/16/01 09:40 Date Received..: 10/17/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	0.2	0.1 stion Pacto	mg/L or: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0 stion Facto	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-09

TOTAL Metals

Lot-Sample #...: A1J180104-012 Matrix.....: WG

Date Sampled...: 10/15/01 15:40 Date Received..: 10/17/01

		REPORTIN	īG		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	. EMA9V1A
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9V1A
-		Dilution Fac	tor: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9V1A
		Dilution Fac	tor: 1			
Copper	0.037	0.025	mg/L	SW846 6010B	10/22-10/25/01	BMA9Vla
		Dilution Fac	- -			
Manganese	3.4	0.015	mg/L	SW846 6010B	10/22-10/25/01	. BMA9Vla
3		Dilution Fac				
mackel	0.020	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9V1A
	- 	Dilution Fac				

Client Sample ID: SPMW-09

General Chemistry

Lot-Sample #...: AlJ180104-012 Work Order #...: EMA9V Matrix..... WG

Date Sampled...: 10/15/01 15:40 Date Received..: 10/17/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION - ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	5.1	1.0	mg/L	MCAWW 353.2	10/24/01	1297510
	DII	ution Facto	or: 10			
Nitrogen, as Ammonia	17	1.0	mg/L	MCAWW 350.2	10/20/01	1293094
	Dil	ution Facto	or: 1			

Client Sample ID: SPMW-10

TOTAL Metals

Lot-Sample #...: AlJ180104-013 Matrix....: WG

Date Sampled...: 10/16/01 11:15 Date Received..: 10/17/01

		REPORTIN	I G		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	<u>UNITS</u>	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #	: 1292308					
Arsenic	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9W1A
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA9W1A
_		Dilution Fac	tor: 1			
Cadmium	0.0052	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA9W1A
		Dilution Fac	tor: 1			
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	EMA9W1A
		Dilution Fac	tor: 1			
Manganese	7.4	0.015	mg/L	SW846 6010B	10/22-10/25/01	RMA9WLA
J		Dilution Fac	tor: 1			
ckel	0.10	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA9WLA
		Dilution Fac	_			

Client Sample ID: SPMW-10

General Chemistry

Lot-Sample #...: A1J180104-013 Work Order #...: EMA9W Matrix..... WG

Date Sampled...: 10/16/01 11:15 Date Received..: 10/17/01

PARAMETER	RESULT	<u>RL</u>	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	1.4	0.1 ntion Facto	mg/L or: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0 tion Facto	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-11

TOTAL Metals

Lot-Sample #...: A1J180104-014 Matrix....: WG

Date Sampled...: 10/15/01 17:25 Date Received..: 10/17/01

		REPORTIN	IG		PREPARATION- WORK	
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE ORDE	R #
Prep Batch #	: 1292308					
Arsenic	0.013	0.010	mg/L	SW846 6010B	10/22-10/25/01 KMA9	XLAC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01 EMA9	X1AF
•		Dilution Fac				
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01 EMA9	X1AD
		Dilution Fac				
Copper	0.025	0.025	mg/L	SW846 6010B	10/22-10/25/01 KNA9	Xlaf
		Dilution Fac				
Manganese	0.74	0.015	mg/L	SW846 6010B	10/22-10/25/01 EMA9	Xlac
		Dilution Fac	_			
ckel	0.045	0.010	mg/L	SW846 6010B	10/22-10/25/01 EMA9	Xlab
		Dilution Fac	_			

Client Sample ID: SPMW-11

General Chemistry

Lot-Sample #...: AlJ180104-014 Work Order #...: EMA9X Matrix.....: WG

Date Sampled...: 10/15/01 17:25 Date Received..: 10/17/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	5.6 pile	1.0 ntion Facto	mg/L or: 10	MCAWW 353.2	10/24/01	1297510
Nitrogen, as Ammonia		1.0 tion Facto	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

Client Sample ID: SPMW-12

TOTAL Metals

Lot-Sample #...: A1J180104-015 Matrix....: WG

Date Sampled...: 10/15/01 16:40 Date Received..: 10/17/01

	REPORTING	;		PREPARATION- WORK
RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE ORDER #
.: 1292308				
0.018	0.010	mg/L	SW846 6010B	10/22-10/25/01 EMA901AC
	Dilution Fact	or: 1		
ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01 EMA901AE
		_		, ,
NTO	0 0020	ma/L	SW846 6010B	10/22-10/25/01 EMA901AD
		•	0000	20, 22 20, 20, 22 2020 2020
0 043	0.025	mer/T.	SW846 6010B	10/22-10/25/01 BMA901AF
0.043		_	0	20,00 00,00,00 0000
. ~	0.015	/7	CMOAC COLOD	10/22-10/25/01 KMA901AG
1.7		_	SMO40 GOIDD	10/22-10/23/01 MARSVINS
	Dilution Facto	or: 1		
0.053	0.010	mg/L	SW846 6010B	10/22-10/25/01 KMA901AH
	Dilution Facto	or: 1		
	.: 1292308 0.018 ND ND 0.043	RESULT LIMIT	.: 1292308 0.018 0.010 Dilution Factor: 1 ND 0.0030 Mg/L Dilution Factor: 1 ND 0.0020 Mg/L Dilution Factor: 1 0.043 0.025 Mg/L Dilution Factor: 1 1.7 0.015 Mg/L Dilution Factor: 1	### RESULT LIMIT UNITS METHOD 1: 1292308 0.018

Client Sample ID: SPOB-34

TOTAL Metals

Lot-Sample #...: AlJ180104-018 Matrix.....: WG

Date Sampled...: 10/15/01 18:15 Date Received..: 10/17/01

_						
		REPORTIN	G		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #.	: 1292308					
Arsenic	0.012	0.010	mg/L	SW846 6010B	10/22-10/25/03	EMA931AC
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/25/01	EMA931AE
		Dilution Fact	=		, , , , , , , , , , , , , , , , , , , ,	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/25/01	EMA931AD
Cacinzain	2125	Dilution Fact		0010 00102	20, 22 20, 20, 00	,,,
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/25/01	RMA931AF
Copper	ND	Dilution Fact		54040 00105	20,22 20,23,03	
Warran a a	0.32	0.015	/T	SW846 6010B	10/22-10/25/01	PMAQ31AC
Manganese	0.32	0.015	mg/L	SMO40 GOTOD	10/22-10/25/01	. BMAJJING
		Dilution Fact	or: l			
Lckel	ND	0.010	mg/L	SW846 6010B	10/22-10/25/01	EMA931AH
		Dilution Fact	or: 1			

Client Sample ID: SPOB-34

General Chemistry

Lot-Sample #...: AlJ180104-018 Work Order #...: EMA93 Matrix..... WG

Date Sampled...: 10/15/01 18:15 Date Received..: 10/17/01

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite	ND Dilu	0.1 ution Facto	mg/L or: 1	MCAWW 353.2	10/24/01	1297509
Nitrogen, as Ammonia		1.0	mg/L or: 1	MCAWW 350.2	10/20/01	1293094

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A1J180104 Matrix..... WATER

PARAMETER	RESULT	REPORTIN LIMIT	IG UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample	#: A1J190000)-308 Prep B	Batch #:	1292308		
Arsenic	ИD	0.010	mg/L	SW846 6010B	10/22-10/24/01	EMFXH1AA
		Dilution Fac	tor: 1			
Beryllium	ND	0.0030	mg/L	SW846 6010B	10/22-10/24/01	EMFXH1AD
-		Dilution Fac	tor: 1			
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/22-10/24/01	EMEXHIAC
		Dilution Fac	-		20, 22 20, 23, 02	
Copper	ND	0.025	mg/L	SW846 6010B	10/22-10/24/01	EMFXH1AE
		Dilution Fac	•		20, 52 20, 22, 42	
Manganese	ND	0.015	mg/L	SW846 6010B	10/22-10/24/01	EMPYH1AF
gaassa		Dilution Fac		2	20,02 20,21,02	
Nickel	ND	0.010	mg/L	SW846 6010B	10/22-10/24/01	EMFXH1 AG
	2120	Dilution Fact		5	10/11 10/24/01	mir miring
$lue{}$						
NOTE (S):						

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A1J180104

Matrix....: WATER

Nitrate-Nitrite	RESULT LIM: Work (ORTING IT UNITS Order #: EMPOQ1AA mg/L on Factor: 1	METHOD MB Lot-Sample #: MCAWW 353.2	PREPARATION- ANALYSIS DATE A1J240000-509 10/24/01	PREP BATCH # 1297509
Nitrate-Nitrite	ND 0.1	Order #: EMPOP1AA mg/L on Factor: 1	MB Lot-Sample #: MCAWW 353.2	A1J240000-510 10/24/01	1297510
Nitrogen, as Ammonia	1.0	Order #: EMG7R1AA mg/L m Factor: 1	MB Lot-Sample #: MCAWW 350.2	A1J200000-094 10/20/01	1293094

NOTE(S):

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	A1J180104			Matrix	WATER
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#:	A1J190000-	308 Prep Ba	tch #: 1292308		
Arsenic	101	-	SW846 6010B	10/22-10/24/01	EMFXH1AH
Cadmium	101	(80 - 120) Dilution Facto	SW846 6010B	10/22-10/24/01	EMFXH1AJ
Beryllium	103	(80 ~ 120) Dilution Facto	SW846 6010B	10/22-10/24/01	EMFXH1AK
Copper	104	(80 - 120) Dilution Facto	SW846 6010B r: 1	10/22-10/24/01	EMFXH1AL
Manganese	107	(80 - 120) Dilution Factor	SW846 6010B r: 1	10/22-10/24/01	EMFXH1AM
ckel	95	(80 - 120) Dilution Factor	SW846 6010B r: 1	10/22-10/24/01	EMFXHIAN
NOTE (S):		·····			· · · · · · · · · · · · · · · · · · ·

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #: AlJ180104 Matri	ix WATER
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PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate-Nitrite		Work Order	#: EMPOQIAC LCS	Lot-Sample#: A1J240000	-509
	110	(89 - 116)	MCAWW 353.2	10/24/01	1297509
		Dilution Fact	or: 1		
Nitrate-Nitrite		Work Order	#: EMPOPIAC LCS	S Lot-Sample#: A1J240000	-510
	111	(89 - 116) Dilution Factor	MCAWW 353.2 or: 1	10/24/01	1297510
Nitrogen, as Amm	onia	Work Order	#: EMG7R1AC LCS	Lot-Sample#: A1J200000-	094
	105	(85 - 114) Dilution Facto	MCAWW 350.2 or: 1	10/20/01	1293094

NOTE (S):

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot # Date Sampled		0104 5/01 11:15 Date R	eceived.	: 10/17/01	Matrix	: WG
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sampl	e #: A1J18	0104-013 Prep B	atch #	.: 1292308		
Arsenic	105	(75 - 125)		SW846 6010B	10/22-10/25/01	EMA9W1AF
	90	(75 - 125) 16	(0-20)	SW846 6010B	10/22-10/25/01	EMA9W1AG
		Dilution Fac	tor: 1			
Beryllium	110	(75 - 125)		SW846 6010B	10/22-10/25/01	EMA9W1AM
•	93	(75 - 125) 17	(0-20)	SW846 6010B	10/22-10/25/01	EMA9W1AN
		Dilution Fac	tor: 1			
Cadmium	108	(75 - 125)		SW846 6010B	10/22-10/25/01	EMA9W1AJ
	90	(75 - 125) 16	(0-20)	SW846 6010B	10/22-10/25/01	ema9w1ak
		Dilution Fact	tor: 1			
Copper	104	(75 - 125)		SW846 6010B	10/22-10/25/01	EMA9W1AQ
	89	(75 - 125) 15	(0-20)	SW846 6010B	10/22-10/25/01	EMA9W1AR
		Dilution Fact	or: 1			
anganese	NC, MSB	(75 - 125)		SW846 6010B	10/22-10/25/01	EMA9W1AU
	NC, MSB	(75 - 125)	(0-20)	SW846 6010B	10/22-10/25/01	ema9w1av
		Dilution Fact	or: 1			
Nickel	110	(75 - 125)		SW846 6010B	10/22-10/25/01	EMA9W1AX
	91	(75 - 125) 16	(0-20)	SW846 6010B	10/22-10/25/01	EMA9W1A0
		Dilution Fact	or: 1			

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

NC The recovery and/or RPD were not calculated.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A1J180104 Matrix...... WG

Date Sampled...: 10/15/01 17:50 Date Received..: 10/17/01

	PERCENT	RECO	ÆRY	RPD		PREPARATION- PREP
PARAMETER	RECOVERY	LIMI	rs	RPD LIMITS	METHOD	ANALYSIS DATE BATCH #
Nitrate-Nitr	ite		WO# :	EMA9W1A2-MS/	EMA9W1A3-MSD	MS Lot-Sample #: A1J180104-013
	95	(20	- 183)		MCAWW 353.2	10/24/01 1297509
	88	(20	- 183)	1.8 (0-99)	MCAWW 353.2	10/24/01 1297509
			Dilut	ion Factor: 1		
Nitrate-Nitr	ite		WO# :	EMA921AK-MS/	EMA921AL-MSD	MS Lot-Sample #: AlJ180104-017
	98	(20	183)		MCAWW 353.2	10/24/01 1297510
	101	(20	183)	1.8 (0-99)	MCAWW 353.2	10/24/01 1297510
			Dilut	ion Factor: 1		
Nitrogen, as	Ammonia		WO#:	EMA9W1AC-MS/	EMA9W1AD-MSD	MS Lot-Sample #: AlJ180104-013
_	106	(63	126)		MCAWW 350.2	10/20/01 1293094
	99	(63	126)	6.4 (0-29)	MCAWW 350.2	10/20/01 1293094
			Dilut	ion Factor: 1		

NOTE(S):

Cox-Colvin & Associates, Inc.

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Chain-of-Custody Record

Analytical Laboratory: Severn Trent

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Project:

Project Number: South Point RD/RA

Sampler(s): CAC GAL

Sample ID	Date	Time	Media	Container Type	Preservative	Requested Analysis	Cooler ID
SPIS-23	10/15/10	18:25	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	7835
SPIS-23	plerla	25131	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J. 595
SPIS-24	Tohelei	17:20	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	51.16
SPIS-24	विदिश्य	(2:20	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	-46
SPIS-24A	10/16/01	12:20	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J145
SPIS-24A	10/16/01	12:20	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	ナル
SPMW-01	10/14/41	13:15	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J146
SPMW-01	10/16/01	13:15	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	7146
SPMW-02	10/16/00	10:15	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	1196
SPMW-02	14/16/01	10:15	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J146
SPMW-03	10/15/01	10.45	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J145
SPMW-03	10/16/01	p:45	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	21.46
SPMW-04	10/15(61	[6:10]	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	
SPMW-04	10/17/01	16:10	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	2535
SPMW-05	1015/11	17:45	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	7,00
SPMW-05	10/15/21	17:45	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	
SPMW-07	10/16/01	12:45	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J196
SPMW-07	10/6/01	12:45	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	गायद
SPMW-07A	10/16/191	12:45	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J146
SPMW-07A	10/11/01	12:45	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	1146
SPMW-08	10/16/01	9:40	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	1146
SPMW-08	16/6/6/	9:40	Ground Water	250 ml Plastic	HNO3, Ice	! Total Metals (As, Be, Cd, Cu, Mn, and Ni)	3145

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Chain-of-Custody Record

Analytical Laboratory: Severn Trent

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Project:

Project Number: South Point RD/RA

Sampler(s): CAC GAL

Sample ID	Date	Time	Media	Container Type	Preservative	Requested Analysis	Cooler ID
SPMW-09	10/12/01	15:40	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	0626
SPMW-09	10/15/01	15:40	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	1623
SPMW-10	10/16/01	11:15	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J146
SPMW-10	10/16/61	11:15	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J146
SPMW-10MS	10 helen	11:15	Ground Water	1 Liter Plastic 🥎	H2SO4, Ice	Ammonia and Nitrate/Nitrite	J146
SPMW-10MS	10/18/01	11:15	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	7146
SPMW-10MSD	10/16/21	11:15	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	1146
SPMW-10MSD	शिक्ष	11:15	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	J146
SPMW-11	10 12 01	17.25	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	7,85
SPMW-11	10/15/01	17:25	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	5505
SPMW-12	10/15/01	16:40	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	5.33
SPMW-12	10/15/01	16:40	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	(1.3
SPMW-13	10/15/01	17:00	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	.,
SPMW-13	10 15 61	17:25	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	,51,41.
SPOB-12R	10/15/01	17:50	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	3686
SPOB-12R	10/15/01	17:50	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	1584
SPOB-34	10/11/01	18:15	Ground Water	1 Liter Plastic	H2SO4, Ice	Ammonia and Nitrate/Nitrite	200
SPOB-34	10/13/01	18:15	Ground Water	250 ml Plastic	HNO3, Ice	Total Metals (As, Be, Cd, Cu, Mn, and Ni)	

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Chain-of-Custody Record

Analytical Laboratory: Severn Trent

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Project:

Project Number: South Point RD/RA

Sampler(s): CAC GAL

Sample ID Rate	Time M	edia Co	ontainer Type	Preservative	Requeste	d Analysis	Cooler ID
Relinquished By Many Al	Date: 10/60/	Time: 15,00	Received By:	RenzBu	Date	0/17/01, Time	950/A
Relinquished By	Date:	Time:	Received By:	J	, Date	Time	
Relinquished By:	Date:	Time:	Received By:	_	Date:	Time	
Comments Please see attached PQL table f	or reporting limits.	<u></u> '!!!					
	_						
Deliverables Data Package: Standard	Tu	irnaround Time: N	iormai	Disk Del	iverables? Yes	Number of Cop	pies: 1
Send Data to: Craig Cox	Shipping Info: Carrier: Fe	edEx V	Vaybill:	Custody Se	at:	Cooler Preserv.	Water Ice